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THE PENTAGON TILT

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Northeast-Midwest Institute

THE PENTAGON TILT

Regional Biases in Defense Spending and Strategy

Virginia Mayer

NORTHEAST-MIDWEST INSTITUTE
THE CENTER FOR REGIONAL POLICY

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The Center for Regional Policy

David S. Harrison, Executive Director

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Preface

This report discusses major trends in the regional distribution of spending by the U.S. Department of Defense (DoD). It also traces changes in the way the Pentagon has allocated its funds on a state-by-state basis for periods of up to 35 years. The data contained in The Pentagon Tilt is taken from various DoD documents, the sources for which are listed below each table. In addition, an appendix at the end of the study lists other sources for defense budget information.

A preliminary version of The Pentagon Tilt was released in January 1983. This final report contains all fiscal 1983, 1984, and 1985 actual data currently available. A short section on the proposed fiscal 1986 defense budget and the most recent contract awards also is included. Projections for defense expenditures between 1983 and 1989 are included in Chapter IV.

For a more detailed discussion of the issues presented in The Pentagon Tilt, particularly strategic concerns, and for additional data, readers should consult the Northeast-Midwest Institute's 1980 publication, The Unprotected Flank: Regional and Strategic Imbalances in Defense Spending Patterns. Copies are available from the Publications Office, Northeast-Midwest Institute: The Center for Regional Policy, 218 D Street, S.E., Washington, D.C. 20003.

Introduction

The Department of Defense (DoD) is the nation's largest employer, with over 2.3 million employees and a fiscal 1985 budget of more than $274 billion. Over the past 30 years, the sheer size of the defense budget has given the Pentagon substantial influence over the shape and health of regional economies. Now, with defense spending under the Reagan administration commanding a larger portion of the federal budget and the gross national product, this influence has entered a new period of expansion and importance. As this study illustrates, most of the states that have benefited from DoD spending in the last few decades are located in the South and West.

A summary of the trends in defense spending shows that since 1950 the distribution of Pentagon funds increasingly has favored Southern and Western states. A number of recent decisions to locate major facilities and activities in the Northeast-Midwest region may indicate a shift in this trend; nonetheless, the greatest proportion of defense dollars, personnel, and installations are located in the South and West, as shown in Table 1, for example:

- Sixty-seven percent of all principal defense installations, 85 percent of all military construction dollars, and 63 percent of all prime contracts are located in the South and West.
- For every tax dollar the Northeast-Midwest region sends to Washington, it receives back an average of 18 cents in defense spending, while the South and West receive an average of 35 cents.
- In fiscal 1983, the South and West received 69 percent of total defense expenditures -- $987 per capita -- while the Northeast-Midwest region received 31 percent, or $565 per capita.
- The Northeast-Midwest region's share of military prime contract dollars decreased from 71.8 percent in 1951 to 37.0 percent in 1983, although New England's share of prime contracts actually grew during that period from 10.2 percent to 10.9 percent.

TABLE 1

Summary Table 1983

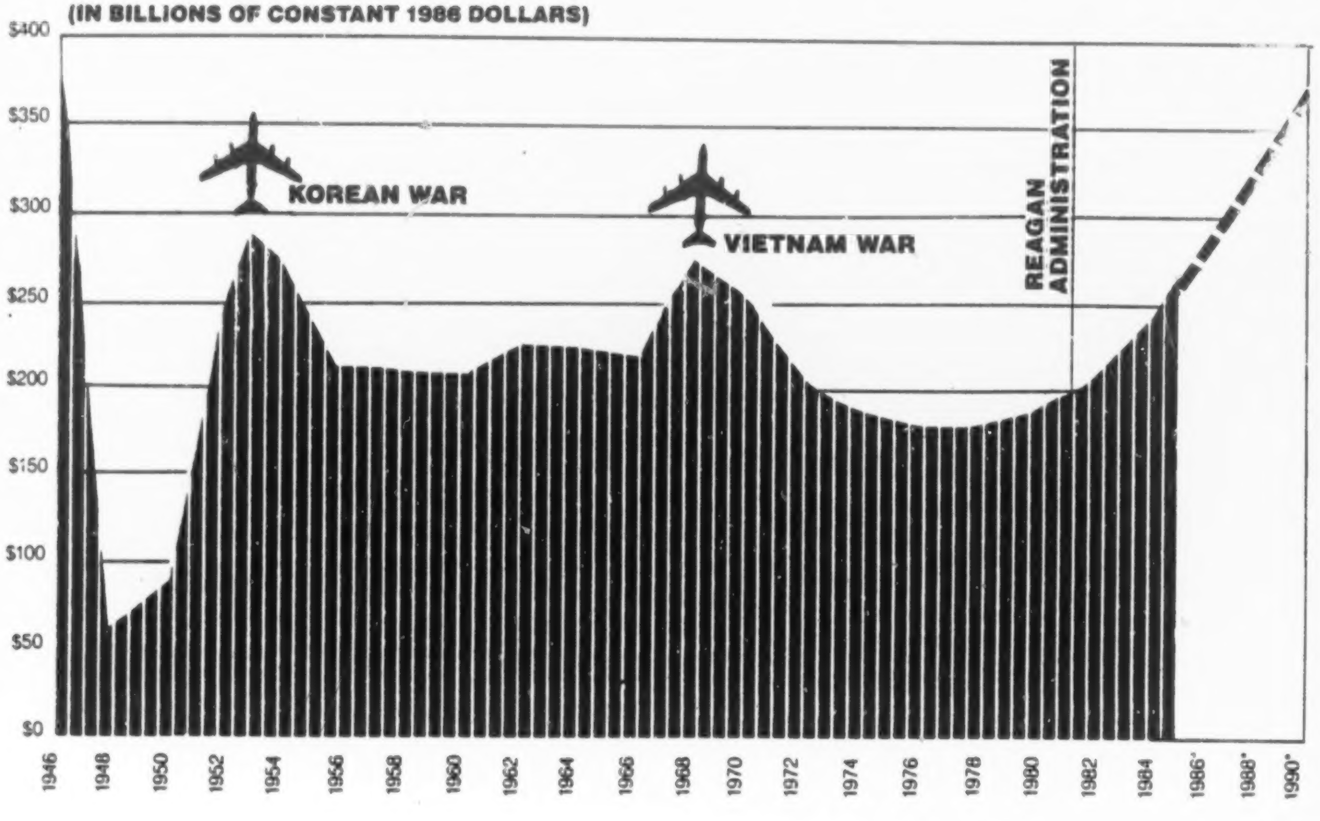
Region	Percent of Population	Percent of Federal Taxes	Percent of Total Defense Expenditures	Percent of Prime Contract Dollars	Percent of Defense R&D Dollars	Percent of Personnel	Percent of Payroll	Percent of Military Construction Dollars	Percent of Principal Installations
Northeast*	23.3	25.8	22.2	27.2	32.5	12.9	13.4	10.7	21.9
New England	5.3	6.0	8.2	10.9	10.9	2.7	3.4	3.4	7.4
Mid-Atlantic	17.9	19.8	14.0	16.3	21.6	10.2	10.0	7.3	14.5
Midwest	20.8	20.8	8.9	9.8	6.8	6.6	7.3	4.7	11.1
Northeast-Midwest	44.0	46.6	31.0	37.0	39.3	19.6	20.7	15.4	33.0
South	31.9	28.7	33.7	26.8	21.8	46.4	45.8	41.6	33.3
West	24.1	24.7	35.2	36.3	38.9	34.0	33.5	43.0	33.7
South and West	56.0	53.4	69.0	63.0	60.7	80.4	79.3	84.6	67.0
U.S. Total**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*District of Columbia is not included. It is included under South.

**Columns may not add to exactly 100 due to rounding.

FIGURE 1
PEACETIME MILITARY BUILD-UP
The Historical Context

As this chart illustrates, peacetime spending remained fairly constant for the 30 years before the current Administration, when defense spending will rise beyond previous wartime levels. (Based on February 1985 OMB data for National Defense [050] outlays.)



SOURCE: Defense Budget Project: 236 Massachusetts Ave. NE • Suite 301 • Washington, DC 20002

*proposed

- Despite the substantial increase (81 percent) in the number of DoD employees in the United States over the past 34 years, Massachusetts, New Jersey, and Illinois had fewer DoD personnel in 1983 than in 1949.

- Finally, although the military construction budget more than doubled between fiscal 1981 and fiscal 1985, the Northeast-Midwest region's share of the national total actually declined from 20 percent to 17.1 percent. The Midwest experienced drastic reductions in military construction spending during this period; its share dropped from 7.1 percent to 5.3 percent of the national total.

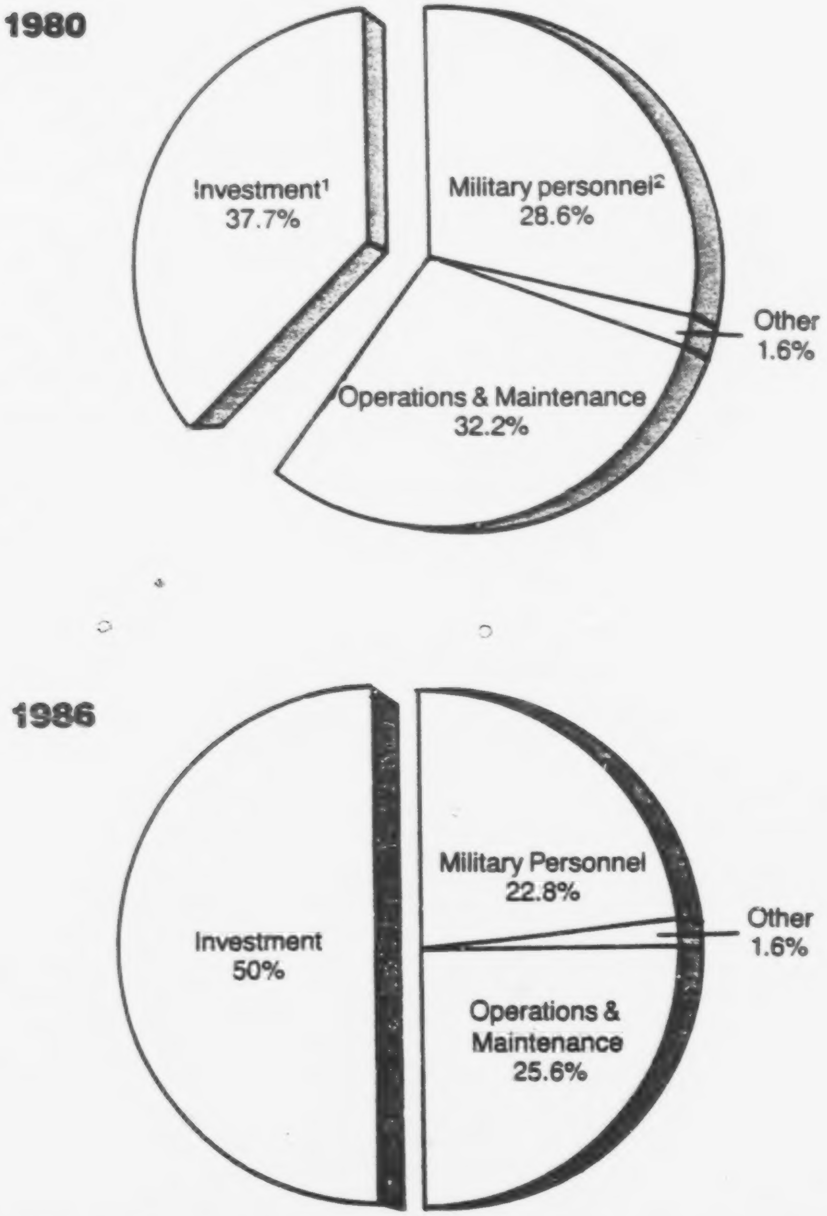
Figure 1 offers a historical analysis of the current peacetime military buildup, reflecting the large increases during the Reagan administration. Total defense budget authority has increased 53.8 percent since 1981, from $178.4 billion to $274.4 billion in fiscal 1985, and is projected to rise to $477.7 billion by fiscal 1990. Given the scale of these increases, it is important to trace the history of the distribution of Pentagon spending to evaluate how future changes may affect various regions of the country.

The substantial buildup in defense spending has been accompanied by a significant shift in DoD's budget emphasis, as evidenced by Figure 2, with the majority of defense dollars now allocated to major weapons procurement rather than payroll. Procurement as a percentage of DoD's budget authority is projected to increase from 24 percent in fiscal 1981 to 37.5 percent in fiscal 1986. The Pentagon's procurement account has experienced 63 percent real growth over just the last three years. The acquisition of weapons and other combat material is the fastest growing and largest part of the budget, and has a substantial impact on the industrial sector, particularly in the Northeast and Midwest.

The purpose of tracking the aforementioned trends is not only to determine how much defense spending states currently receive, but also to answer several other important questions, including: How has this general level evolved over time? What is the composition of expenditures a state currently receives, and how has it changed over time? Given the shifting emphasis within the defense budget, what may states expect regarding future defense expenditures? Particularly for planning purposes, states must know the form in which they receive defense dollars and their stake in particular parts of the budget. Once the defense budget has been translated in this manner, it is much easier to see why a state gets the overall share of spending it does, and what can be done to either maintain or increase the level in a specific category.

In any discussion of the distribution of the military budget, it also is important to recognize the secondary impacts of defense spending. When taken into account, these secondary impacts, or the lack thereof, create even greater disparities in the amount of defense funds allocated to the Northeast-Midwest region. Each dollar of defense spending produces a "multiplier" effect in a community. A model developed by the Regional Science Research Institute (RSRI) found that the indirect or secondary effects of defense expenditures are three times greater than the direct impacts. For example, the approximately $550 million in total Pentagon expenditures Iowa received in fiscal 1983 actually generated over $1.5 billion of local economic activity. This model is several

FIGURE 2
WEAPONS V. READINESS
Where is the Defense Dollar Really Going?



NOTES:

[1] Investment includes research and development, procurement, military construction and nuclear warhead programs in the Department of Energy.

[2] Military Personnel includes personnel and retirement pay.

Percentages refer to national defense budget authority. Totals may not add up to 100% due to rounding.

SOURCE:

Historical Tables, *Budget of the United States Government FY 1986*, OMB, February 4, 1985.

years old; thus actual impact figures most likely would be even greater due to changes in the inflation rate. Conversely, a sudden withdrawal of defense expenditures, such as a base closing or a contract termination, can produce stagnation or decline in a local economy.

Data Resources, Inc. (DRI), under contract from DoD, recently completed several studies that discuss the indirect impacts of defense spending and a model developed by DRI to measure them. The Defense Economic Impact Modeling System (DEIMS) analyzes the impact of defense dollars on specific sectors of the economy, allowing better estimates of supply and demand requirements for both DoD and defense industries. General forecasts of defense spending are discussed in Chapter IV.

The regional shift in DoD spending is of both economic and military consequence. The current structure of our military forces concentrates a high proportion of facilities, personnel, and procurement in the South and West. This imbalance may well reduce the overall strength and readiness of the U.S. military, and has a profound impact on local, state, and federal economies. Some of these strategic concerns include:

- o the ability of the U.S. industrial base to respond to either a short or prolonged military conflict. The economic decline of the 1970s and 1980s, greater foreign competition, and deterioration of the manufacturing sector have called into question the ability of the industrial base to respond to military needs with little or no advance warning;
- o the ability of the Defense Department to downscale or dismantle production processes of a major weapon system or program effectively and smoothly. DoD's Office of Economic Adjustment currently is undertaking a preliminary review of this process, which requires planning to estimate impacts on all sectors: industry, labor, and state and local economies. In some cases, the Defense Department can encourage responsible actions by defense contractors and provide necessary information on adjustment processes to affected parties;
- o the increasing reliance on a variety of strategic and tactical weapons, including bombers, missiles, and fighters. This strategy requires careful selection of the location and utilization of these costly systems, including potential sites in the Northeast and Midwest, especially in the context of rapid changes in the international political environment;
- o the suitability of operational methods and weapon systems to the climactic and geographic conditions in which they are likely to be used. Given the increasingly important role of new technologies in the defense program, and the precision required in their use, it is critical that research, development, and training of personnel be attuned to all conditions of weather and terrain.

The Pentagon Tilt is designed to serve as a reference guide on the most current regional trends in military spending. Previously the Northeast-Midwest Institute published The Unprotected Flank: Regional Imbalances in Defense Spending Patterns (1980) and A Case of Inequity: Regional Patterns in Defense

Expenditures, 1950-1977 (1977), two extensive analyses of the economic and military consequences of defense spending.

This study examines seven categories of defense spending: total outlays, procurement, research and development, military construction, personnel, payroll, and defense facilities. The data for each category is state specific, and does not include information on various industrial sectors. The study deals solely with the direct impact of the distribution of military funds to the states, and only those within the continental United States. To compare trends in spending, random time spans were chosen for each category of spending. The time spans were kept consistent throughout the study where possible.

The goal of this study is to provide a resource tool for federal, state, and local officials that enables them to determine current state shares of defense spending and how these levels have changed over time. It divides the defense budget by category, because state shares can vary sharply from one category to another. This study in no way makes judgments about the optimum level or configuration of spending. Instead, it seeks to educate officials not only on the state-by-state distribution of defense spending but also on the specific nature of the dollar awards to enhance planning and development within the states.

Defense spending currently constitutes nearly 30 percent of the federal budget. The direct and indirect impacts of this spending will have a significant influence on the economic development of states that receive large infusions of Pentagon dollars and those that do not. With the information in this report, officials at the federal, state, and local levels can better understand the increasing influence of defense spending and evaluate policies that determine the pattern of its distribution.

I. The President's Proposed Fiscal 1986 Defense Department Budget

The president has proposed budget authority of $313.7 billion and outlays of $277.5 billion for the Department of Defense (DoD) for fiscal 1986. This proposed increase of $29 billion or 10.2 percent in authority and $31.2 billion or 12.7 percent in outlays over fiscal 1985 reflects the administration's continuing desire to increase funding for national defense significantly. While budget authority for the entire federal budget would decrease by $4.9 billion from 1985, defense budget authority would increase by $29 billion. Increases in defense outlays would be more than double the $14.6 billion outlay increase proposed for the entire budget.

Under the president's budget, national defense would represent 29 percent of the federal budget in fiscal 1986, compared to 25 percent in 1981. In an effort to recoup funds that were cut from requests in previous years, DoD is projecting that its budget authority would grow by 12.8 and 13.4 percent in fiscal 1987 and 1988 and 34 percent in 1990. The five-year defense plan for fiscal years 1986 to 1990 is projected to cost approximately $2 trillion.

As in the past several years, the largest growth in the defense budget would occur in procurement, research and development, and military construction. DoD's fiscal 1986 proposal reflects a continued heavy emphasis on procurement (including weapons), earmarking $106.8 billion, or over one-third of the entire defense budget, for this function. Between 1981 and 1985, Pentagon budget authority for procurement more than doubled. The research and development and military construction budgets would triple their 1981 levels by fiscal 1986. The authority level for research and development would increase by $7.8 billion in fiscal 1986, maintaining a continued heavy emphasis on strategic programs. Although relatively small in dollar terms, the proposed $1.6 billion increase in military construction would represent the largest rate of growth (30 percent) of all accounts.

One measure of state share of defense dollars is via prime contract awards. Table 2 provides a state break-out of the fiscal 1984 military prime contract dollar awards as released recently by the Defense Department. The Northeast-Midwest region received 37.9 percent of military prime contract dollars awarded in fiscal 1984, slightly more than its 37.0 percent share in

TABLE 2

Department of Defense Military Prime Contract Awards: Fiscal 1984

Region and State	Amount (in thousands of dollars)	Percent of Total	Population (in thousands)	Percent of Total	Per Capita Average[1]
New England					
Connecticut	5,459,344	4.4	3,154	1.3	1,731
Maine	532,352	0.4	1,156	0.5	461
Massachusetts	7,028,885	5.7	5,798	2.5	1,212
New Hampshire	662,912	0.5	977	0.4	679
Rhode Island	395,770	0.3	962	0.4	411
Vermont	170,066	0.1	530	0.2	321
Total or Average	14,249,329	11.5	12,577	5.3	1,133
Mid-Atlantic					
Delaware	226,338	0.2	613	0.3	369
Maryland	4,013,171	3.2	4,349	1.8	923
New Jersey	3,277,608	2.6	7,515	3.2	436
New York	9,514,628	7.7	17,735	7.5	536
Pennsylvania	3,252,502	2.6	11,901	5.0	273
Total or Average	20,284,247	16.4	42,113	17.8	482
Midwest					
Illinois	1,475,916	1.2	11,511	4.9	128
Indiana	2,521,610	2.0	5,498	2.3	459
Iowa	405,277	0.3	2,910	1.2	139
Michigan	2,510,005	2.0	9,075	3.8	277
Minnesota	1,826,129	1.5	4,162	1.8	439
Ohio	2,803,866	2.3	10,752	4.6	261
Wisconsin	959,207	0.8	4,766	2.0	201
Total or Average	12,502,010	10.1	48,674	20.6	257
South					
Alabama	1,131,637	0.9	3,990	1.7	284
Arkansas	691,732	0.6	2,349	1.0	294
District of Columbia	815,499	0.7	623	0.3	1,309
Florida	4,033,680	3.3	10,976	4.6	368
Georgia	3,122,839	2.5	5,837	2.5	535
Kentucky	448,060	0.4	3,723	1.6	120
Louisiana	1,855,210	1.5	4,462	1.9	416
Mississippi	2,189,633	1.8	2,598	1.1	843
North Carolina	862,850	0.7	6,165	2.6	140
Oklahoma	535,415	0.4	3,298	1.4	162
South Carolina	478,024	0.4	3,300	1.4	145
Tennessee	795,834	0.6	4,717	2.0	169
Texas	8,750,329	7.1	15,989	6.8	547
Virginia	4,604,833	3.7	5,636	2.4	817
West Virginia	72,075	0.1	1,952	0.8	37
Total or Average	30,387,650	24.5	75,615	32.0	402

TABLE 2 (continued)

Department of Defense Military Prime Contract Awards: Fiscal 1984 (continued)

Region and State	Amount (in thousands of dollars)	Percent of Total	Population (in thousands)	Percent of Total	Per Capita Average[1]
West					
Alaska	436,501	0.4	500	0.2	873
Arizona	1,764,241	1.4	3,053	1.3	578
California	28,519,741	23.0	25,622	10.8	1,113
Colorado	1,153,188	0.9	3,178	1.3	363
Hawaii	536,735	0.4	1,039	0.4	517
Idaho	50,796	*	1,001	0.4	51
Kansas	2,361,961	1.9	2,438	1.0	969
Missouri	6,520,208	5.3	5,008	2.1	1,302
Montana	83,456	0.1	824	0.3	101
Nebraska	166,959	0.1	1,606	0.7	104
Nevada	128,604	0.1	911	0.4	141
New Mexico	552,451	0.4	1,424	0.6	388
North Dakota	181,401	0.1	686	0.3	264
Oregon	230,454	0.2	2,674	1.1	86
South Dakota	46,604	*	706	0.3	66
Utah	880,448	0.7	1,652	0.7	533
Washington	2,884,412	2.3	4,349	1.8	663
Wyoming	73,581	0.1	511	0.2	144
Total or Average	46,571,741	37.6	57,182	24.2	814
Northeast	34,533,576	27.9	54,690	23.2	631
Midwest	12,502,010	10.1	48,674	20.6	257
Northeast and Midwest	47,035,586	37.9	103,364	43.8	455
South	30,387,650	24.5	75,615	32.0	402
West	46,571,741	37.6	57,182	24.2	814
South and West	76,959,391	62.1	132,797	56.2	580
U.S. Total	123,994,977	100.0	236,161	100.0	525

*Less than one-tenth of one percent.

[1] Based on constant 1984 population.

SOURCE: Staff calculations from U.S. Department of Defense, _Prime Contract Awards by State -- Fiscal Year 1984_ (Washington, D.C.: 1985).

the previous year. On a per capita basis, Northeastern and Midwestern states received an average of $455, below the national average of $525 and the average of $580 for Southern and Western states. The Southern and Western states continue to receive the vast majority of prime contract dollars -- 62.1 percent, although New York remains the second largest recipient of these awards with 7.7 percent. A more detailed analysis of prime contract awards and the fiscal 1983 data appears in the Procurement section of this report.

II. The Defense Budget and the Region

The fiscal 1985 defense appropriations bill, passed as part of the continuing resolution, gives DoD $274.4 billion in spending authority, a 9.4 percent increase over the fiscal 1984 level of $250.9 billion. This figure is $17.8 billion below the amount requested by the president in his budget submission in February 1984. Table 3 summarizes some of the defense budget categories and compares the final version to the amounts approved by the House and Senate, and originally proposed by the president. The distribution of the fiscal 1985 budget by service is as follows:

Service Branch	Amount (in millions)
Army:	$ 70,731,442
Navy:	93,354,952
Air Force:	96,713,105
Reserve and National Guard:	380,000

The increase in the defense budget from fiscal 1984 represents a 5.6 real growth rate. DoD's share of federal budget outlays will be approximately 30 percent in fiscal 1985, compared with 25 percent in 1981. The five-year defense plan for 1984-1988 is projected to cost approximately $1.7 trillion, and, if projections for fiscal 1989 are included, total expenditures for the six-year period would be nearly $2.2 trillion.

DoD's fiscal 1985 budget reflects a continued heavy emphasis on procurement programs, earmarking $97.1 billion for such activities. This funding level, which includes major weapon systems, represents over one-third of the entire DoD budget and has increased 102 percent (unadjusted for inflation) since 1981. Despite this dramatic rise, the Northeast-Midwest region continues to receive a disproportionately low share of prime contract awards. In fiscal 1983, approximately 37 percent of all military prime contract dollars were awarded to firms in the region, a 2 percent decline from the previous year.

TABLE 3

Comparative State of New Budget Obligational Authority for the Department of Defense (in thousands of dollars)

	Fiscal 1984 Enacted	Fiscal 1985 Conference*	Increase	Conference Compared With		
				President's Submission	House	Senate
Military Personnel	$48,345,353	$66,895,639	+18,550,286	-935,961	-94,052	-119,465
Operations & Maintenance	$70,893,183	$77,521,356	+6,628,173	-3,405,686	+922,227	-680,371
Procurement (new budget authority)	$85,667,505	$97,111,404	+11,443,899	-10,474,937	+3,943,533	-2,202,900
Research, Development, Test and Evaluation	$26,739,269	$31,187,071	+4,447,802	-2,797,966	+1,407,533	-710,496
Total	$250,869,301	$274,398,173	+23,528,872	-17,823,650	+6,106,541	-3,713,932

*Figures based on the Continuing Resolution as printed in the Congressional Record, Vol. 130, No. 133 - Part II, October 10, 1984, pp. H11983-11985.

However, several significant locational decisions will result in added defense dollars and jobs for the Northeast-Midwest region. First, the Defense Department will be sending three conventionally powered aircraft carriers to Philadelphia for an extensive overhaul and rebuilding program called SLEP (Service Life Extension Program). Prospects for continuation of this work are good, as Navy Secretary John Lehman noted recently. He "expects to have a ship undergoing SLEP at Philadelphia for as long as you can see."[1]

In September 1984, Army Secretary John Marsh, Jr. announced that a new Army light infrantry division would be established at Fort Drum in Watertown, N.Y. Currently underutilized by the services, given its potential property and other resources, the installation is undergoing significant renovation and soon will be home to over 10,000 soldiers and their families.

Two recent DoD decisions reflect the Northeast-Midwest region's extensive resources in the the fields of education and technology. The Defense Department awarded a grant to Carnegie-Mellon University in Pittsburgh to establish a software research institute. In addition, a component of DoD's research effort, a Supercomputing Research Center, will be located in Prince George's County, Maryland. The Center will house a team of 100 scientists who will work to design a computer that is 10,000 times faster than those currently considered "super."

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[1] San Diego Union, December 6, 1984, p. A-2.

These decisions constitute significant steps toward recognizing and fully utilizing the resources of the Northeast and Midwest. Although disparities remain, the region is receiving some critical awards that will affect local and state economies.

While some of the additional defense dollars may be spent in states in the region, current spending patterns and future projections show that the increase will not alter some present disparities significantly. Currently, only 19.6 percent of all defense installations and 28.3 percent of personnel are located in the region. Based on the regional distribution of the fiscal 1983 defense budget, the spending pattern for fiscal 1985 would be as follows (see Table 1 for percent shares):

TABLE 4

DOD Budget: Fiscal 1985 Projections
(in billions of dollars)

	Total	Procurement	R & D	Military Personnel
Northeast	60.9	26.4	9.1	9.0
Midwest	24.2	9.5	2.0	4.9
Northeast-Midwest	85.1	35.9	11.1	13.9
South	92.5	26.0	5.9	30.4
West	96.6	35.3	14.2	22.4
South and West	189.3	61.2	20.1	53.1

NOTE: Estimates calculated on the basis of percent share received by each region in fiscal 1983 for each category listed. Due to rounding, some categories may not add up to exactly 100.

The following chapters provide an in-depth view of spending in several categories, analyzing each on a historical basis to provide a framework within which to view current spending patterns.

III. Total Department of Defense Expenditures

Total Department of Defense expenditures include funds for two main categories: payroll outlays and prime contract awards. The payroll figures include active duty military, civilian, reserve and National Guard, and retired pay. Prime contracts include any contracts over $25,000 for supply, research and development, service, construction, and civil functions. Total expenditures also includes prime contract awards of $25,000 or less; separate data on such contracts are not maintained.

Total DoD expenditures represent the most accurate and complete estimate available of defense outlays going to the states. As evidenced throughout this study, the South and West receive the majority of defense funds. In fiscal 1983, the Northeast-Midwest region received $58.2 billion or 31 percent of total defense expenditures, while the South and West received $129.3 billion -- more than double the Northeast-Midwest share. Although the South and West have 56 percent of the nation's population, they receive 69 percent of all defense expenditures (see Table 5).

The regional disparities are even more pronounced when total defense expenditures are measured on a per capita basis. The per capita average in the South and West is $987, substantially higher than the U.S. average of $801 and nearly double the Northeast-Midwest per capita average of $565. Only one state in the Mid-Atlantic and Midwestern regions -- Maryland -- reached or exceeded the U.S. per capita average. On the other hand, New England states (with the exception of Vermont) all had per capita averages higher than that of the region as a whole. Connecticut and Massachusetts had per capita expenditure rates of $1,782 and $1,237, due in large part to numerous prime contracts awarded there.

The distribution of total defense expenditures is projected to undergo some shifts in the next few years, as procurement becomes a much larger factor in the defense budget. In fiscal 1983, the Northeast-Midwest region received 37 percent of all prime contract dollars awarded, down from 72 percent in 1951 and 39 percent as recently as 1982 (see Table 8). If the region's share of prime contract awards declines further, and the shift in expenditures toward procurement continues, the regional disparity in total defense expenditures will escalate to even greater levels.

TABLE 5

Total Department of Defense Expenditures: Fiscal 1983

Region and State	Amount[1] (in thousands of dollars)	Percent of Total	Population (in thousands)	Percent of Total	Per Capita Expenditures[2]
New England					
Connecticut	5,591,957	3.0	3,138	1.3	1,782
Maine	688,842	0.4	1,146	0.5	601
Massachusetts	7,133,657	3.8	5,767	2.5	1,237
New Hampshire	966,094	0.5	959	0.4	1,007
Rhode Island	677,029	0.4	955	0.4	709
Vermont	230,459	0.1	525	0.2	439
Total or Average	15,288,038	8.2	12,490	5.3	1,224
Mid-Atlantic					
Delaware	403,911	0.2	606	0.3	667
Maryland	5,696,702	3.0	4,304	1.8	1,324
New Jersey	3,983,324	2.1	7,468	3.2	533
New York	10,819,480	5.8	17,667	7.6	612
Pennsylvania	5,404,484	2.9	11,895	5.1	454
Total or Average	26,307,901	14.0	41,940	17.9	627
Midwest					
Illinois	3,014,773	1.6	11,486	4.9	262
Indiana	2,812,823	1.5	5,479	2.3	513
Iowa	549,565	0.3	2,905	1.2	189
Michigan	2,480,913	1.3	9,069	3.9	274
Minnesota	1,847,994	1.0	4,144	1.8	446
Ohio	4,853,767	2.6	10,746	4.6	452
Wisconsin	1,045,029	0.6	4,751	2.0	220
Total or Average	16,604,864	8.9	48,580	20.8	342
South					
Alabama	2,697,005	1.4	3,959	1.7	681
Arkansas	1,144,119	0.6	2,328	1.0	491
District of Columbia	2,113,150	1.1	623	0.3	3,392
Florida	8,546,368	4.6	10,680	4.6	800
Georgia	5,038,017	2.7	5,732	2.4	879
Kentucky	1,567,565	0.8	3,714	1.6	422
Louisiana	2,434,360	1.3	4,438	1.9	549
Mississippi	2,670,868	1.4	2,587	1.1	1,032
North Carolina	3,251,740	1.7	6,082	2.6	535
Oklahoma	2,031,077	1.1	3,298	1.4	616
South Carolina	2,409,911	1.3	3,264	1.4	738
Tennessee	1,537,682	0.8	4,685	2.0	328
Texas	13,556,308	7.2	15,724	6.7	862
Virginia	13,986,708	7.5	5,550	2.4	2,520
West Virginia	261,070	0.1	1,965	0.8	133
Total or Average	63,245,948	33.7	74,629	31.9	847

TABLE 5 (continued)

Total Department of Defense Expenditures: Fiscal 1983
(in thousands of dollars)

Region and State	Amount[1] (in thousands of dollars)	Percent of Total	Population (in thousands)	Percent of Total	Per Capita Expenditures[2]
West					
Alaska	958,310	0.5	479	0.2	2,001
Arizona	2,426,047	1.3	2,963	1.3	819
California	37,053,078	19.8	25,174	10.8	1,472
Colorado	2,418,667	1.3	3,139	1.3	771
Hawaii	2,365,025	1.3	1,023	0.4	2,312
Idaho	258,788	0.1	989	0.4	262
Kansas	2,343,216	1.2	2,425	1.0	966
Missouri	6,732,673	3.6	4,970	2.1	1,355
Montana	268,721	0.1	817	0.3	329
Nebraska	632,264	0.3	1,597	0.7	396
Nevada	542,828	0.3	891	0.4	609
New Mexico	1,189,631	0.6	1,399	0.6	850
North Dakota	393,528	0.2	680	0.3	579
Oregon	473,591	0.3	2,662	1.1	178
South Dakota	216,714	0.1	700	0.3	310
Utah	1,441,489	0.8	1,619	0.7	890
Washington	6,152,182	3.3	4,300	1.8	1,431
Wyoming	158,205	0.1	514	0.2	308
Total or Average	66,024,957	35.2	56,341	24.1	1,172
Northeast	41,595,939	22.2	54,430	23.3	764
Midwest	16,604,864	8.9	48,580	20.8	342
Northeast and Midwest	58,200,803	31.0	103,010	44.0	565
South	63,245,948	33.7	74,629	31.9	847
West	66,024,957	35.2	56,341	24.1	1,172
South and West	129,270,905	69.0	130,970	56.0	987
U.S. Total	187,471,708	100.0	233,980	100.0	801

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[1] Includes expenditures for payroll (active duty, civilian, reserve and retired, and National Guard) and prime contract awards over $25,000 for supply, research and development, service, construction, and civil functions.

[2] Based on constant 1983 population figures.

SOURCE: Staff calculations from U.S. Department of Defense, Atlas/State Abstract For the United States -- Fiscal Year 1983 (Washington, D.C.: 1984).

Another measure of states' receipt of defense expenditures is the federal balance of payments, or the ratio of spending to tax contributions. In fiscal 1983, the Northeast-Midwest region received 89 cents in spending for each dollar contributed to the federal government, of which 18 cents was in the form of defense spending. The remainder was for domestic spending (see Table 6). In sharp contrast, of the $1.07 average return to states in the South and West, 35 cents was in defense and 72 cents in domestic spending. Although the spending/tax ratios do not represent actual dollar flows, they do offer a good representation of the overall defense spending picture, and of the relationship between defense and domestic spending in particular.

A. Procurement

Defense procurement -- the acquisition of materials, arms, supplies, and services for defense activities -- constitutes the largest and fastest growing portion of the defense budget. This category is broken down by prime contracts, small purchases, and subcontracts. It is important to distinguish among these three subsets, as well as between prime contract awards and overall defense spending, so as not to misrepresent or understate a state's share of the defense budget.

Prime contracts are contracts of $25,000 or more (the ceiling was $10,000 prior to 1982) awarded to firms. Generally, the geographic location of the prime contractor is the place listed as the award winner.

The size of the procurement function of DoD's budget has grown enormously. Between 1951 and 1983, the amount spent by DoD on military prime contracts nearly quadrupled (see Table 9). In fiscal 1984, funding for procurement was $86 billion, or fully one-third of the entire defense budget. This figure represents an increase of more than 80 percent (after adjustment for inflation) since 1981, when procurement came to 27 percent of the budget.

During this period of historic growth, the Midwest's share of prime contract awards fell from 31 percent in 1951 to 9.8 percent in 1983, while the Northeast-Midwest share overall tumbled from 71.7 percent to 37.0 percent. Conversely, the share of prime contract dollars going to the South and West increased substantially from 1951 to 1983, rising from 28 percent to 63 percent. California's share alone increased from 13.2 percent to 22.2 percent. (Table 10 shows changes in the distribution of military prime contract awards by state and region for the period 1951-1983).

Figure 3 clearly illustrates the shift of defense procurement dollars away from the Northeast and Midwest to the South and West. In 1951, four of the ten states receiving the highest percentage of prime contract dollars were located in the Midwest; by 1983, however, none of the top ten states was located there. In fiscal 1983, three of the ten companies receiving the most military prime contract dollars were located in the Northeast and Midwest, in New York, Massachusetts, and Connecticut.

TABLE 6

Federal Balance of Payments: Fiscal 1983

Region and State	Ratio of Spending to Tax Contributions			Rank by Total
	Defense	Domestic	Total	
New England				
Connecticut	.45	.49	.94	33
Maine	.27	.95	1.22	12
Massachusetts	.37	.72	1.09	24
New Hampshire	.35	.62	.97	31
Rhode Island	.25	.80	1.05	27
Vermont	.19	.90	1.09	22
Total or Average	.37	.67	1.04	—
Mid-Atlantic				
Delaware	.21	.59	.80	46
Maryland	.42	.87	1.29	8
New Jersey	.14	.54	.68	51
New York	.18	.74	.92	35
Pennsylvania	.16	.82	.98	29
Total or Average	.19	.73	.92	—
Midwest				
Illinois	.08	.67	.75	48
Indiana	.19	.64	.83	43
Iowa	.07	.79	.86	41
Michigan	.10	.69	.79	47
Minnesota	.16	.70	.86	42
Ohio	.16	.71	.87	39
Wisconsin	.08	.74	.82	45
Total or Average	.12	.69	.81	—
South				
Alabama	.31	.98	1.29	9
Arkansas	.25	1.08	1.33	7
Florida	.29	.81	1.10	18
Georgia	.37	.73	1.10	21
Kentucky	.19	.90	1.09	23
Louisiana	.18	.68	.86	40
Mississippi	.55	1.04	1.59	3
North Carolina	.24	.71	.95	32
Oklahoma	.19	.63	.82	44
South Carolina	.36	.88	1.24	11
Tennessee	.14	1.07	1.21	13
Texas	.25	.50	.75	49
Virginia	.86	.69	1.55	4
West Virginia	.05	1.03	1.08	26
Total or Average	.31	.73	1.04	—

TABLE 6 (continued)

Federal Balance of Payments: Fiscal 1983

	Ratio of Spending to Tax Contributions			Rank by
Region and State	Defense	Domestic	Total	Total
West				
Alaska	.39	.55	.94	34
Arizona	.33	.77	1.10	20
California	.45	.63	1.08	25
Colorado	.24	.65	.89	38
Hawaii	.76	.63	1.39	6
Idaho	.12	1.03	1.15	16
Kansas	.32	.65	.97	30
Missouri	.51	.94	1.45	5
Montana	.12	.98	1.10	19
Nebraska	.15	.89	1.04	28
Nevada	.19	.73	.92	36
New Mexico	.34	1.33	1.67	2
North Dakota	.21	.95	1.16	15
Oregon	.07	.83	.90	37
South Dakota	.14	1.12	1.26	10
Utah	.38	.82	1.20	14
Washington	.46	.67	1.13	17
Wyoming	.09	.61	.70	50
Total or Average	.39	.72	1.11	--
Northeast	.23	.72	.95	--
Midwest	.12	.69	.81	--
Northeast and Midwest	.18	.71	.89	--
South	.31	.73	1.04	--
West	.39	.72	1.11	--
South and West	.35	.72	1.07	--
District of Columbia	.63	4.17	4.80	1
U.S. Total	.27	.73	1.00	--

SOURCES: Staff calculations from U.S. Department of Commerce, Bureau of the Census, Federal Expenditures By State for Fiscal Year 1983 (prepared pursuant to the Consolidated Federal Funds Act) (Washington, D.C.: March 1984), and Tax Foundation, Inc., Monthly Tax Features (Washington, D.C.: April 1984).

FIGURE 3
TEN STATES RECEIVING THE HIGHEST PERCENTAGE OF MILITARY PRIME CONTRACT DOLLARS, 1951 AND 1983

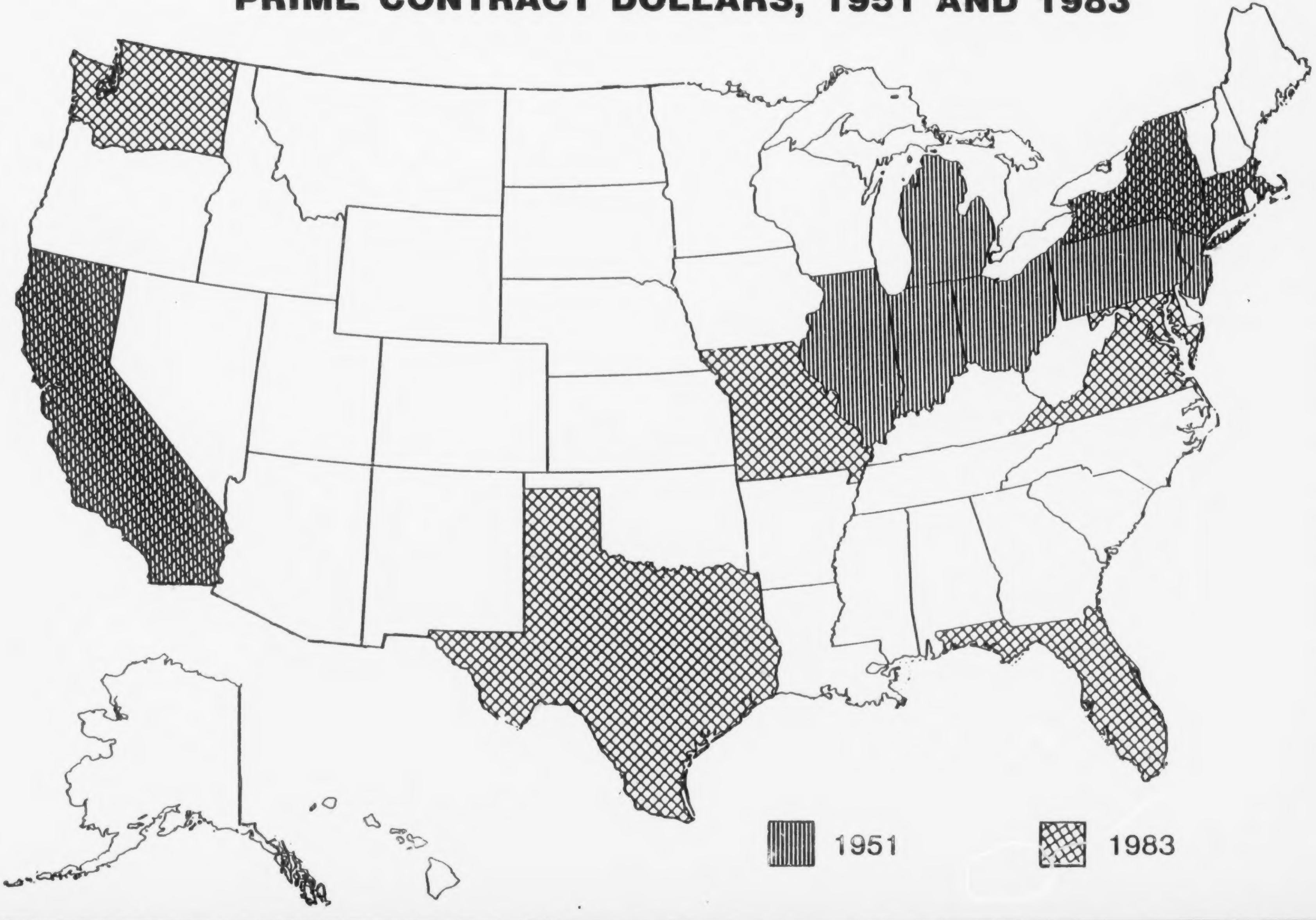

Table 7 lists the top 20 prime contract award recipients and their percentage of the total.

TABLE 7

Major Prime Contract Award Recipients: Fiscal 1983

Rank	Company	Amount (in thousands of dollars)	Percent of Total
1	General Dynamics Corp.	6,818,307	5.32
2	McDonnell Douglas Corp.	6,142,716	4.79
3	Rockwell International Corp.	4,545,112	3.54
4	General Electric Company	4,518,015	3.52
5	Boeing Company	4,422,750	3.45
6	Lockheed Corporation	4,005,714	3.12
7	United Technologies Corp.	3,867,445	3.02
8	Tenneco, Inc.	3,762,135	2.93
9	Howard Hughes Medical Institute	3,239,915	2.53
10	Raytheon Company	2,728,327	2.13
11	Grumman Corporation	2,297,695	1.79
12	Martin Marietta Corporation	2,271,939	1.77
13	Litton Industries, Inc.	2,168,932	1.69
14	Westinghouse Electric Corporation	1,778,335	1.39
15	International Business Machines Co.	1,421,265	1.11
16	LTV Corporation	1,342,875	1.05
17	FMC Corporation	1,235,770	0.96
18	RCA Corporation	1,181,124	0.92
19	TRW, Inc.	1,336,838	0.89
20	Sperry Corporation	1,132,502	0.88

SOURCE: U.S. Department of Defense, 100 Companies Receiving the Largest Dollar Volume of Prime Contract Awards -- Fiscal Year 1983 (Washington, D.C.: 1984).

Between fiscal 1951 and 1983, important shifts occurred in prime contract spending among the states, particularly in the Midwest. Both Illinois and Michigan received fewer actual prime contract dollars in 1983 than in 1951. New England's share increased by 3 percentage points between 1951 and 1980, from 10.2 to 13.2; however, in 1983 it dropped off to 10.9 percent. Texas and California gained substantially during the same period; in 1983 they received $7.6 billion and $22.5 billion more than in 1951. If states in the Northeast and Midwest had received prime contract dollars proportional to their share of population, defense spending in the region in fiscal 1983 would have been more than $8.3 billion higher.

The current pattern of spending is projected to continue, with even greater impact on industries and economies anticipated as the procurement budget grows larger. Because many costly weapons programs are "on line," they will continue to be funded -- and thus reflected -- in budgets and prime contract awards in the future. By 1986, the procurement function is projected to represent 35.2 percent of the entire DoD budget, or $137 billion. As Figure 2 illustrates, if all sectors involved in defense procurement are included -- namely research and development, military construction, and the nuclear warhead program -- DoD will spend an estimated 50 percent of its budget on weapons in 1985. DRI, in its Regional Analysis of Defense Spending, forecasts that the increased procurement dollars for the most part will be awarded to traditionally large defense producing states such as Texas, California, and Georgia. The fastest rates of growth in defense spending, however, actually may occur in several of the Northeastern and Midwestern states, although this will be due mainly to the relatively small base from which they are starting. This forecast is discussed further in Chapter IV.

DoD, along with other federal, state, and local agencies, is actively educating businesses in the defense procurement process. The increase of available information on future defense expenditures, particularly by sector, should be extremely helpful in maximizing an area's opportunity for planning and procuring with DoD. Several of these resources have been utilized in the formulation of this report. In addition, several legislative initiatives -- to be discussed later -- that should increase the number of available DoD contractors and thus strengthen the entire process recently have been introduced and passed.

Procurement in an area can be increased in numerous ways. Three such methods -- the "Items Lacking Competition Program," the New York state Prime-Sub Matching Program, and a study recently completed by the Great Lakes Commission -- represent but a few of the creative ways states and localities can seek to gain a greater share of the defense procurement market. The first two examples address small businesses, while the latter encompasses firms of all sizes.

In July 1984, Representative Howard Wolpe (D-Michigan), in conjunction with the Kalamazoo County Economic Expansion Corporation, the County Chamber of Commerce, and the Michigan Small Business Association, began using a monthly videotaped show on the local cable access channel to display products on which companies can bid. Each product "lacks competition," and after being aired on the show -- "Bid Board" -- is placed on display at the Chamber of Commerce for "hands-on" examination by area merchants and manufacturers. A representative of the Kalamazoo County Economic Expansion Corporation is available to answer questions about bidding and contract procedures. New York state has conducted a similar program through direct mail. The list of products, compiled by DoD, ranges from cotton bandages to soups, and is available from the Defense Logistics Agency.

New York state, with its "Prime-Sub Matching Program," launched an aggressive strategy to keep and attract defense subcontract orders to New York state firms. The program, which got under way in late April 1984, has three segments. In Phase I, New York's largest defense contractors, in conjunction with the state Department of Commerce, hosted a series of training sessions/trade shows for small businesses. Workshops were held in five cities across the state, enabling small businesses to learn the ropes of subcontracting and to meet first hand with representatives from prime contractors.

Prime contractors involved in this program are responsible for placing interested firms identified at workshops on their bid lists as the second phase of the Prime-Sub Program. The state Department of Commerce then will provide follow-up technical assistance. In Phase III, New York state firms will travel to trade shows in California and other areas with many defense contractors to learn about prime contracts and possibly bring home subcontract orders. New York's multi-phase program, known as the East-West Match, is an excellent example of public/private cooperation to increase procurement opportunities for firms in that state.

A study released in July 1984 by the Great Lakes Commission discusses the numerous procurement opportunities available in the Great Lakes, particularly regarding shipbuilding, and how the area can capitalize on them. U.S. Military Vessel Procurement and Great Lakes Shipyards details the history of military shipbuilding in the region and outlines projected construction programs for fiscal years 1983 to 1988. The study concludes that, with some repair to the current shipyards in the Great Lakes, they can serve as viable homes for future naval vessel construction. The study seeks to highlight a budget category in which the Great Lakes region may be able to capitalize on its future growth. In addition, it emphasizes the strategic importance of preserving shipbuilding capacity in the Great Lakes.

As mentioned previously, there are several types of procurement other than prime contracts. Although prime contracts are the main source of procurement expenditures, it is important to note the others.

Small purchases encompass contracts of less than $25,000 (formerly $10,000); due to the large number of transactions, they are reported by the location of the purchasing office rather than the place of performance. This may result in some discrepancy between the defense dollars an area actually receives and those it reportedly has received. In fiscal 1982, small purchases represented less than 7 percent of all defense dollars. This figure will increase as a result of the change in reporting requirements from $10,000 to $25,000, which went into effect in fiscal 1983.

Subcontracts are contracts awarded to businesses by companies that have won larger contracts. For example, production of the wings and seats of an airplane may be contracted out to other firms by the main or prime contractor. It has been estimated that, overall, half of all prime contract funds are delivered in turn to other firms through subcontracts. Although the high incidence of subcontracting has a significant effect on the flow of funds and contracts, DoD has not collected any comprehensive data on subcontracts. The Defense Department is working to alleviate this problem; however, no actual data currently is available. In January 1985, the Program Analysis and Evaluation Division of DoD released a study, Potential Interstate Flows of Defense Purchases, in an effort to estimate subcontract and interstate flows of funds that result from Defense Department purchases. The study analyzes potential direct and indirect purchases in selected major industrial sectors for all states. Because the figures in the study reflect estimates of state-level defense activity, they do not represent actual flows of dollars to states. The study does give projections of sales by subcontractors that can be a particularly useful planning tool for federal, state, and local officials.

Because of the irregularities and unavailability of information on small purchases and subcontracts, prime contract data are the sole source of information for this section. States and localities may be able to furnish the other data on their specific areas.

TABLE 8

Department of Defense Military Prime Contract Awards: Fiscal 1983

Region and State	Amount (in thousands of dollars)	Percent of Total	Population (in thousands)	Percent of Total	Per Capita Expenditures[1]
New England					
Connecticut	5,132,348	4.3	3,138	1.3	1,636
Maine	404,762	0.3	1,146	0.5	353
Massachusetts	6,327,505	5.3	5,767	2.5	1,097
New Hampshire	540,741	0.5	959	0.4	564
Rhode Island	381,458	0.3	955	0.4	399
Vermont	179,856	0.2	525	0.2	343
Total or Average	12,966,670	10.9	12,490	5.3	1,038
Mid-Atlantic					
Delaware	219,537	0.2	606	0.3	362
Maryland	3,539,621	3.0	4,304	1.8	822
New Jersey	2,639,975	2.2	7,468	3.2	354
New York	9,634,611	8.1	17,667	7.6	545
Pennsylvania	3,328,706	2.8	11,895	5.1	280
Total or Average	19,362,450	16.3	41,940	17.9	462
Midwest					
Illinois	1,534,678	1.3	11,486	4.9	134
Indiana	2,117,161	1.8	5,479	2.3	386
Iowa	406,648	0.3	2,905	1.2	140
Michigan	1,782,163	1.5	9,069	3.9	197
Minnesota	1,604,826	1.4	4,144	1.8	387
Ohio	3,364,909	2.8	10,746	4.6	313
Wisconsin	775,358	0.7	4,751	2.0	163
Total or Average	11,585,743	9.8	48,580	20.8	238
South					
Alabama	1,127,067	0.9	3,959	1.7	285
Arkansas	628,784	0.5	2,328	1.0	270
District of Columbia	1,133,417	1.0	623	0.3	1,819
Florida	4,650,187	3.9	10,680	4.6	435
Georgia	2,449,101	2.1	5,732	2.4	427
Kentucky	419,575	0.4	3,714	1.6	113
Louisiana	1,484,285	1.2	4,438	1.9	334
Mississippi	1,840,321	1.5	2,587	1.1	711
North Carolina	786,268	0.7	6,082	2.6	129
Oklahoma	611,610	0.5	3,298	1.4	185
South Carolina	399,944	0.3	3,264	1.4	123
Tennessee	828,315	0.7	4,685	2.0	177
Texas	8,228,879	6.9	15,724	6.7	523
Virginia	7,071,810	6.0	5,550	2.4	1,274
West Virginia	121,709	0.1	1,965	0.8	62
Total or Average	31,781,272	26.8	74,629	31.9	426

TABLE 8 (continued)

Department of Defense Military Prime Contract Awards: Fiscal 1983

Region and State	Amount (in thousands of dollars)	Percent of Total	Population (in thousands)	Percent of Total	Per Capita Expenditures[1]
West					
Alaska	386,429	0.3	479	0.2	807
Arizona	1,359,748	1.1	2,963	1.3	459
California	26,387,160	22.2	25,174	10.8	1,048
Colorado	1,006,934	0.8	3,139	1.3	321
Hawaii	638,975	0.5	1,023	0.4	625
Idaho	49,291	*	989	0.4	50
Kansas	1,574,573	1.3	2,425	1.0	649
Missouri	5,637,519	4.7	4,970	2.1	1,134
Montana	116,801	0.1	817	0.3	143
Nebraska	162,781	0.1	1,597	0.7	102
Nevada	158,682	0.1	891	0.4	178
New Mexico	462,955	0.4	1,399	0.6	331
North Dakota	136,513	0.1	680	0.3	201
Oregon	180,744	0.2	2,662	1.1	68
South Dakota	42,411	*	700	0.3	61
Utah	722,224	0.6	1,619	0.7	446
Washington	3,985,607	3.4	4,300	1.8	927
Wyoming	38,999	*	514	0.2	76
Total or Average	43,048,346	36.3	56,341	24.1	764
Northeast	32,329,120	27.2	54,430	23.3	594
Midwest	11,585,743	9.8	48,580	20.8	238
Northeast and Midwest	43,914,863	37.0	103,010	44.0	426
South	31,781,272	26.8	74,629	31.9	426
West	43,048,346	36.3	56,341	24.1	764
South and West	74,829,618	63.0	130,970	56.0	571
U.S. Total	118,744,481	100.0	233,980	100.0	507

*Less than one-tenth of one percent.

[1] Based on constant 1983 populations.

SOURCE: Staff calculations from U.S. Department of Defense, Military Prime Contract Awards By State: Fiscal Years 1951 to 1983 (Washington, D.C.: 1984).

TABLE 9

Department of Defense Military Prime Contract Awards: Fiscal 1951-1983
(in thousands of dollars)

	1951		1965		1980		1983	
Region and State	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percen of Tota
New England								
Connecticut	1,724,439	5.8	1,180,111	5.1	3,867,188	5.8	5,132,348	4.3
Maine	90,642	0.3	68,771	0.3	456,734	0.7	404,762	0.3
Massachusetts	894,637	3.0	1,178,729	5.1	3,729,145	5.6	6,327,505	5.3
New Hampshire	73,608	0.2	52,400	0.2	305,286	0.5	540,741	0.5
Rhode Island	204,384	0.7	86,323	0.4	261,041	0.4	381,458	0.3
Vermont	22,872	0.1	32,202	0.1	124,506	0.2	179,856	0.2
Total	3,010,582	10.2	2,598,536	11.2	8,743,900	13.2	12,966,670	10.9
Mid-Atlantic								
Delaware	12,256	*	38,239	0.2	239,628	0.4	219,537	0.2
Maryland	595,806	2.0	584,333	2.5	1,783,998	2.7	3,539,621	3.0
New Jersey	1,586,819	5.4	820,309	3.5	1,517,060	2.3	2,639,975	2.2
New York	5,378,758	18.2	2,229,473	9.6	5,647,704	8.5	9,634,611	8.1
Pennsylvania	1,418,668	4.8	988,811	4.2	2,166,190	3.3	3,328,706	2.8
Total	8,992,307	30.4	4,661,165	20.0	11,354,580	17.1	19,362,450	16.3
Midwest								
Illinois	1,585,630	5.4	421,899	1.8	944,812	1.4	1,534,678	1.3
Indiana	1,866,767	6.3	604,925	2.6	1,289,812	1.9	2,117,161	1.8
Iowa	249,715	0.8	133,951	0.6	283,324	0.4	406,648	0.3
Michigan	2,470,032	8.3	532,897	2.3	1,695,844	2.6	1,782,163	1.5
Minnesota	223,724	0.8	259,500	1.1	1,048,530	1.6	1,604,826	1.4
Ohio	2,219,754	7.5	863,113	3.7	1,616,918	2.4	3,364,909	2.8
Wisconsin	633,510	2.1	203,003	0.9	366,107	0.6	775,358	0.7
Total	9,249,132	31.2	3,019,288	13.0	7,245,347	10.9	11,585,743	9.8
South								
Alabama	147,933	0.5	165,176	0.7	625,864	0.9	1,127,067	0.9
Arkansas	52,476	0.2	39,284	0.2	122,159	0.2	628,784	0.5
D. C.	312,928	1.1	247,576	1.1	590,257	0.9	1,133,417	1.0
Florida	75,101	0.3	633,332	2.7	1,984,335	3.0	4,650,187	3.9
Georgia	182,192	0.6	662,417	2.8	883,694	1.3	2,449,101	2.1
Kentucky	69,500	0.2	42,749	0.2	244,913	0.4	419,575	0.4
Louisiana	181,307	0.6	255,834	1.1	480,006	0.7	1,484,285	1.2
Mississippi	42,278	0.1	152,188	0.7	635,953	1.0	1,840,321	1.5
North Carolina	209,813	0.7	288,408	1.2	651,380	1.0	786,268	0.7
Oklahoma	84,291	0.3	119,803	0.5	419,982	0.6	611,610	0.5
South Carolina	118,070	0.4	81,580	0.4	296,753	0.4	399,944	0.3
Tennessee	206,645	0.7	197,283	0.8	519,704	0.8	828,315	0.7
Texas	658,587	2.2	1,446,769	6.2	5,344,938	8.1	8,228,879	6.9
Virginia	230,484	0.8	469,097	2.0	3,343,615	5.0	7,071,810	6.0
West Virginia	38,464	0.1	90,312	0.4	85,797	0.1	121,709	0.1
Total	2,610,069	8.8	4,891,808	21.0	16,229,350	24.5	31,781,272	26.8

TABLE 9 (continued)

Department of Defense Military Prime Contract Awards: Fiscal 1951-1983
(in thousands of dollars)

Region and State	1951		1965		1980		1983	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
West								
Alaska	N/A	N/A	74,175	0.3	250,899	0.4	386,429	0.3
Arizona	51,961	0.2	176,857	0.8	727,193	1.1	1,359,748	1.1
California	3,897,915	13.2	5,153,639	22.1	13,852,612	20.9	26,387,160	22.2
Colorado	64,838	0.2	249,151	1.1	509,859	0.8	1,006,934	0.8
Hawaii	N/A	N/A	72,213	0.3	315,251	0.5	638,975	0.5
Idaho	13,919	*	11,724	0.1	19,456	0.0	49,291	*
Kansas	301,772	1.0	229,051	1.0	775,346	1.2	1,574,573	1.3
Missouri	492,404	1.7	1,060,781	4.6	3,191,183	4.8	5,637,519	4.7
Montana	9,777	*	69,375	0.3	31,762	*	116,801	0.1
Nebraska	94,145	0.3	42,708	0.2	99,675	0.2	162,781	0.1
Nevada	2,019	*	19,142	0.1	50,254	0.1	158,682	0.1
New Mexico	33,827	0.1	84,137	0.4	286,126	0.4	462,955	0.4
North Dakota	2,966	*	48,997	0.2	69,266	0.1	136,513	0.1
Oregon	98,825	0.3	39,624	0.2	130,971	0.2	180,744	0.2
South Dakota	10,891	*	21,062	0.1	16,942	*	42,411	*
Utah	32,869	0.1	191,173	0.8	250,881	0.4	722,224	0.6
Washington	638,944	2.2	545,607	2.3	2,109,804	3.2	3,985,607	3.4
Wyoming	10,407	*	7,867	*	33,188	0.1	38,999	*
Total	5,757,479	19.4	8,097,283	34.8	22,720,668	34.3	43,048,346	36.3
Northeast	12,002,889	40.5	7,259,701	31.2	20,098,480	30.3	32,329,120	27.2
Midwest	9,249,132	31.2	3,019,288	13.0	7,245,347	10.9	11,585,743	9.8
Northeast and Midwest	21,252,021	71.7	10,278,989	44.2	27,343,827	41.2	43,914,863	37.0
South	2,610,069	8.8	4,891,808	21.0	16,229,350	24.5	31,781,272	26.8
West	5,757,479	19.4	8,097,283	34.8	22,720,668	34.3	43,048,346	36.3
South and West	8,367,548	28.3	12,989,091	55.8	38,950,018	58.8	74,829,618	63.0
U.S. Total	29,619,569	100.0	23,268,080	100.0	66,293,845	100.0	118,744,481	100.0

N/A — Not applicable.

*Less than one-tenth of one percent of the total.

SOURCE: Staff calculations from U.S. Department of Defense, Military Prime Contract Awards by State: Fiscal Years 1951 to 1983 (Washington, D.C.: 1984).

TABLE 10

Change in Department of Defense Military Prime Contract Awards: Fiscal 1951-1983[1]
(in thousands of dollars)

Region and State	1980-1983 Amount	1980-1983 Percent	1965-1983 Amount	1965-1983 Percent	1951-1983 Amount	1951-1983 Percent
New England						
Connecticut	1,265,160	32.7	3,952,237	334.9	3,407,909	197.6
Maine	-51,972	-11.4	335,991	488.6	314,120	346.6
Massachusetts	2,598,360	69.7	5,148,776	436.8	5,432,868	607.3
New Hampshire	235,455	77.1	488,341	931.9	467,133	634.6
Rhode Island	120,417	46.1	295,135	341.9	177,074	86.6
Vermont	55,350	44.5	147,654	458.5	156,984	686.4
Total or Average	4,222,770	48.3	10,368,134	399.0	9,956,088	330.7
Mid-Atlantic						
Delaware	-20,091	-8.4	181,298	474.1	207,281	1,691.3
Maryland	1,755,623	98.4	2,955,288	505.8	2,943,815	494.1
New Jersey	1,122,915	74.0	1,819,666	221.8	1,053,156	66.4
New York	3,986,907	70.6	7,405,138	332.1	4,255,853	79.1
Pennsylvania	1,162,516	53.7	2,339,895	236.6	1,910,038	134.6
Total or Average	8,007,870	70.5	14,701,285	315.4	10,370,143	115.3
Midwest						
Illinois	589,866	62.4	1,112,779	263.8	-50,952	-3.2
Indiana	827,349	64.1	1,512,236	250.0	250,394	13.4
Iowa	123,324	43.5	272,697	203.6	156,933	62.8
Michigan	86,319	5.1	1,249,266	234.4	-687,869	-27.8
Minnesota	556,296	53.1	1,345,326	518.4	1,381,102	617.3
Ohio	1,747,991	108.1	2,501,796	289.9	1,145,155	51.6
Wisconsin	409,251	111.8	572,355	281.9	141,848	22.4
Total or Average	4,340,396	59.9	8,566,455	283.7	2,336,611	25.3
South						
Alabama	501,203	80.1	961,891	582.3	979,134	661.9
Arkansas	506,625	414.7	589,500	1,500.6	576,308	1,098.2
D.C.	543,160	92.0	885,841	357.8	820,489	262.2
Florida	2,665,852	134.3	4,016,855	634.2	4,575,086	6,091.9
Georgia	1,565,407	177.1	1,786,684	269.7	2,266,909	1,244.2
Kentucky	174,662	71.3	376,826	881.5	350,075	503.7
Louisiana	1,004,279	209.2	1,228,451	480.2	1,302,978	718.7
Mississippi	1,204,368	189.4	1,688,133	1,109.2	1,798,043	4,252.9
North Carolina	134,888	20.7	497,860	172.6	576,455	274.7
Oklahoma	191,628	45.6	491,807	410.5	527,319	625.6
South Carolina	103,191	34.8	318,364	390.2	281,874	238.7
Tennessee	308,611	59.4	631,032	319.9	621,670	300.8
Texas	2,883,941	54.0	6,782,110	468.8	7,570,292	1,149.5
Virginia	3,728,195	111.5	6,602,713	1,407.5	6,841,326	2,968.2
West Virginia	35,912	41.9	31,397	34.8	83,245	216.4
Total or Average	15,551,922	95.8	26,889,464	549.7	29,171,203	1,117.6

TABLE 10 (continued)

Change in Department of Defense Military Prime Contract Awards: Fiscal 1951-1983[1]
(in thousands of dollars)

Region and State	1980-1983 Amount	1980-1983 Percent	1965-1983 Amount	1965-1983 Percent	1951-1983 Amount	1951-1983 Percent
West						
Alaska	135,530	54.0	312,254	421.0	N/A	N/A
Arizona	632,555	87.0	1,182,891	668.8	1,307,787	2,516.9
California	12,534,548	90.5	21,233,521	412.0	22,489,245	577.0
Colorado	497,075	97.5	757,783	304.1	942,096	1,453.0
Hawaii	323,724	102.7	566,762	784.8	N/A	N/A
Idaho	29,835	153.3	37,567	320.4	35,372	254.1
Kansas	799,227	103.1	1,345,522	587.4	1,272,801	421.8
Missouri	2,446,336	76.7	4,576,738	431.4	5,145,115	1,044.9
Montana	85,039	267.7	47,426	68.4	107,024	1,094.7
Nebraska	63,106	63.3	120,073	281.1	68,636	727.9
Nevada	108,428	215.8	139,540	729.0	156,663	7,759.4
New Mexico	176,829	61.8	378,818	450.2	429,128	1,268.6
North Dakota	67,247	97.1	87,516	178.6	133,547	4,502.6
Oregon	49,773	38.0	141,120	356.1	81,919	82.9
South Dakota	25,469	150.3	21,349	101.4	31,520	289.4
Utah	471,343	187.9	531,051	277.8	689,355	2,097.3
Washington	1,875,803	88.9	3,440,000	630.5	3,346,663	523.8
Wyoming	5,811	17.5	31,132	395.7	28,592	274.7
Total or Average	20,327,678	89.5	34,951,063	431.6	36,265,463	629.9
Northeast	12,230,640	60.9	25,069,419	345.3	20,326,231	169.3
Midwest	4,340,396	59.9	8,566,455	283.7	2,336,611	25.3
Northeast and Midwest	16,571,036	60.6	33,635,874	327.2	22,662,842	106.6
South	15,551,922	95.8	26,889,464	549.7	29,171,203	1,117.6
West	20,327,678	89.5	34,951,063	431.6	36,265,463	629.9
South and West	35,879,600	92.1	61,840,527	476.1	65,436,666	782.0
U.S. Total	52,450,636	79.1	95,476,401	410.3	88,099,508	297.4

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[1] Beginning in fiscal 1982, Military Prime Contract Awards included awards over $25,000. Prior to that time, the level was $10,000 and above.

N/A — Not applicable.

SOURCE: Staff calculations from U.S. Department of Defense, Military Prime Contract Awards By State: Fiscal Years 1951 to 1983 (Washington, D.C.: 1983).

B. Research, Development, Test, and Evaluation

As defined by the Department of Defense, the category of research, development, test, and evaluation includes research, exploratory development, advanced development, engineering development, operational systems development, and management and support services. In fiscal 1982, DoD received approximately $20.5 billion for research -- over half of all federally obligated research funds. Between 1976 and 1982, DoD's share of research dollars increased by over 10 percent, to 58.1 percent, and its dollar amount doubled. In fiscal 1983, DoD received $22.9 billion or 61 percent of all research and development funds. By fiscal 1986, DoD's share is projected to climb to 68 percent, and funding for the activity overall would continue to increase.

The type of work done by contractors varies broadly in the research and development field, as do the types of programs within each category. In general, the majority of research funds is spent on engineering development and advanced development of missile systems and electronics and communications equipment. For fiscal 1983, DoD supplied the following breakdown (statistics for fiscal 1982 are similar):

Type	Percent	Program	Percent of Total
Engineering	53.0	Missile Systems	39.5
Advanced Development	17.4	Electronic & Communications Equipment	28.7
Operational Systems	14.9	Aircraft	12.7
Exploratory Development	7.7	Services	10.0
Research	4.7	Ships	2.5
Management and Support	2.2	Ammunition, Weapons, Others	6.5

SOURCE: U.S. Department of Defense, 500 Contractors Receiving the Largest Dollar Volume of Prime Contract Awards for RDT&E, Fiscal Year 1983 (Washington, D.C.: 1984), p. 3.

In fiscal 1982 and 1983, the composition of the top 500 research and development contractors was virtually the same; therefore fiscal 1983 figures are used here. The top 500 contractors were broken down as follows: 382 U.S. business firms (175 of which were small businesses); 110 educational and nonprofit institutions; five foreign contractors; and three U.S. government agencies. One hundred and two contractors on the 1983 top 500 list did not appear in 1982, suggesting that opportunities exist for businesses not currently performing significant contract work for DoD. The top 25 businesses receiving research, development, test, and evaluation contracts are listed with amounts expended in Table 11. Table 12 provides an overall, state-by-state distribution of fiscal 1983 DoD research and development awards.

As Table 13 illustrates, the Northeast-Midwest region received 35.5 percent of all research and development funds in fiscal 1982, below its 1976 share of 38.5 percent. The West in particular saw an increase in its share of funds, from 43.2 percent in 1980 to 45.6 percent in 1982. Together, the South and West received 64.5 percent of all research and development funds in fiscal 1982. California alone received 30 percent. Massachusetts, with 10.4 percent, was the second largest recipient of research awards.

A comparison of Table 12 and Table 13 shows the increase in share of the Northeast-Midwest region from 35.5 percent in fiscal 1982 to 39.3 percent in 1983. The Mid-Atlantic states received a substantial percentage of research and development funds in 1983 -- 21.6 percent. In comparison, the South received only slightly more, 21.8 percent. Table 14 shows the extent of the changes in DoD research and development expenditures over a seven-year period.

A highly unexplored area for many firms and institutions, research and development is a critical facet of the defense budget and one that is increasing rapidly. The research and development budget is projected to rise to over $38 billion by 1987. This category also illustrates opportunities for expansion -- as shown by the Northeast-Midwest region's increased share of research and development funds between 1982 and 1983. The region always has had strong university and educational ties, and the 1983 figures for this category of the budget show one way to leverage those strengths.

TABLE 11

Major Recipients of DoD Research, Development, Test, and Evaluation Awards: Fiscal 1983

Rank	Company/Institution	Amount (in thousands of Dollars)
1	Boeing Company	$1,703,491
2	Rockwell International Corporation	1,171,720
3	Martin Marietta Corporation	1,048,660
4	TRW, Inc.	669,331
5	McDonnell Douglas Corporation	647,323
6	General Electric Company	645,426
7	General Dynamics Corporation	643,504
8	Hughes Aircraft Company	627,333
9	Lockheed Missiles and Space Company, Inc.	509,219
10	United Technologies Corporation	339,431
11	International Business Machines Company	296,385
12	Westinghouse Electric Corporation	293,277
13	Raytheon Company	266,373
14	Aerospace Corporation	260,474
15	Massachusetts Institute of Technology	247,845
16	Northrop Corporation	245,512
17	Johns Hopkins University	226,703
18	Honeywell, Inc.	218,371
19	Vought Corporation	210,841
20	Mitre Corporation	204,242
21	Avco Corporation	199,514
22	Lockheed Corporation	194,378
23	GTE Products Corporation	192,997
24	Sperry Corporation	182,690
25	RCA Corporation	181,732

SOURCE: U.S. Department of Defense, _500 Contractors Receiving the Largest Dollar Volume of Prime Contract Awards for RDT&E, Fiscal 1983_ (Washington, D.C.: 1984).

TABLE 12

Department of Defense Research and Development Awards: Fiscal 1983

Region and State	Amount (in thousands of dollars)	Percent of Total
New England		
Connecticut	545,832	2.4
Maine	8,494	*
Massachusetts	1,651,991	7.2
New Hampshire	54,229	0.2
Rhode Island	227,521	1.0
Vermont	7,245	*
Total	2,495,312	10.9
Mid-Atlantic		
Delaware	9,322	*
Maryland	1,835,186	8.0
New Jersey	1,007,829	4.4
New York	1,573,172	6.9
Pennsylvania	512,325	2.2
Total	4,937,834	21.6
Midwest		
Illinois	81,180	0.4
Indiana	129,891	0.6
Iowa	17,296	0.1
Michigan	239,480	1.0
Minnesota	319,040	1.4
Ohio	762,158	3.3
Wisconsin	9,905	*
Total	1,558,950	6.8
South		
Alabama	422,637	1.8
Arkansas	908	*
District of Columbia	559,639	2.4
Florida	807,682	3.5
Georgia	99,750	0.4
Kentucky	14,515	0.1
Louisiana	35,494	0.2
Mississippi	133,388	0.6
North Carolina	63,089	0.3
Oklahoma	11,586	0.1
South Carolina	5,221	*
Tennessee	13,887	0.1
Texas	849,684	3.7
Virginia	1,960,100	8.6
West Virginia	277	*
Total	4,977,857	21.8

TABLE 12 (continued)

Department of Defense Research and Development Awards: Fiscal 1983

Region and State	Amount (in thousands of dollars)	Percent of Total
West		
Alaska	11,426	*
Arizona	389,070	1.7
California	6,001,252	26.2
Colorado	135,834	0.6
Hawaii	30,448	0.1
Idaho	3,301	*
Kansas	58,053	0.3
Missouri	466,719	2.0
Montana	536	*
Nebraska	16,829	0.1
Nevada	362,709	1.6
New Mexico	947,540	4.1
North Dakota	2,559	*
Oregon	8,741	*
South Dakota	13	*
Utah	146,645	0.6
Washington	325,274	1.4
Wyoming	1,449	*
Total	8,908,398	38.9
Northeast	7,433,146	32.5
Midwest	1,558,950	6.8
Northeast and Midwest	8,992,096	39.3
South	4,977,857	21.8
West	8,908,398	38.9
South and West	13,886,255	60.7
U.S. Total	22,878,351	100.0

*Less than one-tenth of one percent of total.

SOURCE: Staff calculations from National Science Foundation, Federal Funds for Research and Development, Volume XXXIII (Washington, D.C.: September 1984).

TABLE 13

Department of Defense Research and Development Awards: Fiscal 1976-1982
(in thousands of dollars)

Region and State	1976		1980		1982	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
New England						
Connecticut	145,712	1.5	232,161	1.7	278,979	1.4
Maine	3,467	*	4,097	*	4,303	*
Massachusetts	897,477	9.3	1,448,495	10.4	2,134,654	10.4
New Hampshire	22,729	0.2	27,757	0.2	25,984	0.1
Rhode Island	78,414	0.8	113,975	0.8	199,193	1.0
Vermont	29,384	0.3	34,994	0.3	20,589	0.1
Total	1,177,183	12.2	1,861,479	13.4	2,663,702	13.0
Mid-Atlantic						
Delaware	932	*	6,827	*	2,657	*
Maryland	775,918	8.1	966,468	7.0	1,361,326	6.6
New Jersey	341,528	3.5	517,702	3.7	668,068	3.3
New York	487,111	5.1	589,520	4.2	836,415	4.1
Pennsylvania	307,363	3.2	369,312	2.7	434,953	2.1
Total	1,912,852	19.9	2,449,829	17.6	3,303,419	16.1
Midwest						
Illinois	65,056	0.7	48,422	0.3	68,860	0.3
Indiana	35,477	0.4	75,851	0.5	106,013	0.5
Iowa	6,219	0.1	49,805	0.4	62,919	0.3
Michigan	106,205	1.1	171,458	1.2	210,822	1.0
Minnesota	51,641	0.5	116,468	0.8	235,205	1.1
Ohio	353,587	3.7	522,213	3.8	619,490	3.0
Wisconsin	4,352	*	6,164	*	9,209	*
Total	622,537	6.5	990,381	7.1	1,312,518	6.4
South						
Alabama	133,139	1.4	232,605	1.7	306,457	1.5
Arkansas	3,616	*	1,627	*	904	*
District of Columbia	219,379	2.3	286,632	2.1	350,335	1.7
Florida	455,690	4.7	734,411	5.3	1,292,802	6.3
Georgia	11,053	0.1	38,043	0.3	72,869	0.4
Kentucky	23,111	0.2	16,126	0.1	10,358	0.1
Louisiana	3,263	*	18,216	0.1	30,196	0.1
Mississippi	22,805	0.2	50,390	0.4	71,349	0.3
North Carolina	15,608	0.2	31,397	0.2	37,501	0.2
Oklahoma	4,345	*	4,209	*	11,025	0.1
South Carolina	2,177	*	2,521	*	3,906	*
Tennessee	81,024	0.8	196,249	1.4	281,428	1.4
Texas	336,768	3.5	344,357	2.5	447,898	2.2
Virginia	444,908	4.6	616,541	4.4	923,727	4.5
West Virginia	2,066	*	17,666	0.1	25,554	0.1
Total	1,758,952	18.3	2,590,990	18.7	3,866,309	18.9

TABLE 13 (continued)

Department of Defense Research and Development Awards: Fiscal 1976-1982
(in thousands of dollars)

Region and State	1976		1980		1982	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
West						
Alaska	7,733	0.1	11,597	0.1	7,932	*
Arizona	64,685	0.7	173,265	1.2	172,639	0.8
California	2,999,703	31.1	3,762,778	27.1	6,141,172	30.0
Colorado	32,436	0.3	134,501	1.0	253,498	1.2
Hawaii	17,903	0.2	7,727	0.1	13,729	0.1
Idaho	0	*	217	*	20	*
Kansas	10,163	0.1	314,486	2.3	605,579	3.0
Missouri	328,258	3.4	687,188	4.9	800,411	3.9
Montana	1,796	*	5,774	*	1,187	*
Nebraska	2,097	*	3,323	*	6,586	*
Nevada	18,677	0.2	20,543	0.1	46,487	0.2
New Mexico	231,292	2.4	250,637	1.8	449,771	2.2
North Dakota	125	*	5,085	*	11,580	0.1
Oregon	2,451	*	4,625	*	4,620	*
South Dakota	208	*	109	*	2,623	*
Utah	26,237	0.3	112,542	0.8	180,559	0.9
Washington	416,370	4.3	500,656	3.6	637,558	3.1
Wyoming	143	*	284	*	527	*
Total	4,160,277	43.2	5,995,337	43.2	9,336,478	45.6
Northeast	3,090,035	32.1	4,311,308	31.0	5,967,121	29.1
Midwest	622,537	6.5	990,381	7.1	1,312,518	6.4
Northeast and Midwest	3,712,572	38.5	5,301,689	38.2	7,279,639	35.5
South	1,758,952	18.3	2,590,990	18.7	3,866,309	18.9
West	4,160,277	43.2	5,995,337	43.2	9,336,478	45.6
South and West	5,919,229	61.5	8,586,327	61.8	13,202,787	64.5
U.S. Total	9,631,801	100.0	13,888,016	100.0	20,482,426	100.0

*Less than one-tenth of one percent of total.

SOURCE: Staff calculations from National Science Foundation, "Federal Obligations for Research and Development, By State and Agency: Fiscal Years 1976, 1980, 1982"; Federal Funds for Research and Development, Fiscal Years 1976, 1980, 1982 (Washington, D.C.: 1977, 1981, 1983).

TABLE 14

Change in Research and Development Awards: Fiscal 1976-1982
(in thousands of dollars)

	1980-1982		1976-1982	
Region and State	Amount	Percent	Amount	Percent
New England				
Connecticut	46,818	20.2	133,267	91.5
Maine	206	5.0	836	24.1
Massachusetts	686,159	47.4	1,237,177	137.9
New Hampshire	-1,773	-6.4	3,255	14.3
Rhode Island	85,218	74.8	120,779	154.0
Vermont	-14,405	-41.2	-8,795	-29.9
Total or Average	802,223	43.1	1,486,519	126.3
Mid-Atlantic				
Delaware	-4,170	-61.1	1,725	185.1
Maryland	394,858	40.9	585,408	75.4
New Jersey	150,366	29.0	326,540	95.6
New York	246,895	41.9	349,304	71.7
Pennsylvania	65,641	17.8	127,590	41.5
Total or Average	853,590	34.8	1,390,567	72.7
Midwest				
Illinois	20,438	42.2	3,804	5.8
Indiana	30,162	39.8	70,536	198.8
Iowa	13,114	26.3	56,700	911.7
Michigan	39,364	23.0	104,617	98.5
Minnesota	118,737	101.9	183,564	355.5
Ohio	97,277	18.6	265,903	75.2
Wisconsin	3,045	49.4	4,857	111.6
Total or Average	322,137	32.5	689,981	110.8
South				
Alabama	73,852	31.7	173,318	130.2
Arkansas	-723	-44.4	-2,712	-75.0
District of Columbia	63,703	22.2	130,956	59.7
Florida	558,391	76.0	837,112	183.7
Georgia	34,826	91.5	61,816	559.3
Kentucky	-5,768	-35.8	-12,753	-55.2
Louisiana	11,980	65.8	26,933	825.4
Mississippi	20,959	41.6	48,544	212.9
North Carolina	6,104	19.4	21,893	140.3
Oklahoma	6,816	161.9	6,680	153.7
South Carolina	1,385	54.9	1,729	79.4
Tennessee	85,179	43.4	200,404	247.3
Texas	103,541	30.1	111,130	33.0
Virginia	307,186	49.8	478,819	107.6
West Virginia	7,888	44.7	23,488	1,136.9
Total or Average	1,275,319	49.2	2,107,357	119.8

TABLE 14 (continued)

Change in Research and Development Awards: Fiscal 1976-1982
(in thousands of dollars)

Region and State	1980-1982		1976-1982	
	Amount	Percent	Amount	Percent
West				
Alaska	-3,665	-31.6	199	2.6
Arizona	-626	-.4	107,954	166.9
California	2,378,394	63.2	3,141,469	104.7
Colorado	118,997	88.5	221,062	681.5
Hawaii	6,002	77.7	-4,174	-23.3
Idaho	-197	-90.8	20	*
Kansas	291,093	92.6	595,416	5,858.7
Missouri	113,223	16.5	472,153	143.8
Montana	-4,587	-79.4	-609	-33.9
Nebraska	3,263	98.2	4,489	214.1
Nevada	25,944	126.3	27,810	148.9
New Mexico	199,134	79.5	218,479	94.5
North Dakota	6,495	127.7	11,455	9,164.0
Oregon	-5	-.1	2,169	88.5
South Dakota	2,514	2,306.4	2,415	1,161.1
Utah	68,017	60.4	154,322	588.2
Washington	136,902	27.3	221,188	53.1
Wyoming	243	85.6	384	268.5
Total or Average	3,341,141	55.7	5,176,201	124.4
Northeast	1,655,813	38.4	2,877,086	93.1
Midwest	322,137	32.5	689,981	110.8
Northeast and Midwest	1,977,950	37.3	3,567,067	96.1
South	1,275,319	49.2	2,107,357	119.8
West	3,341,141	55.7	5,176,201	124.4
South and West	4,616,460	53.8	7,283,558	123.0
U.S. Total	6,594,410	47.5	10,850,625	112.7

*Less than one-tenth of one percent of the total.

SOURCE: Staff calculations from National Science Foundation, "Federal Obligations for Research and Development, By State and Agency: Fiscal Years 1976, 1980, 1982"; _Federal Funds for Research and Development: Fiscal Years 1976, 1980, 1982_ (Washington, D.C.: 1977, 1981, 1983).

C. Personnel

The category of Department of Defense personnel includes both civilians and individuals on active duty. Over the last 34 years, the total number of DoD employees has increased by 81 percent to its current level of 2.3 million. This increase, however, took place mainly in Southern and Western states, and reflects a continuing trend of regional imbalance in defense allocations. While the number of military personnel in Northeastern and Midwestern states during this period increased by an average of 40.4 and 43.6 percent, personnel levels in Southern and Western states grew by an average of 125.2 and 54.4 percent.

The South and West continue to house an overwhelming majority of defense personnel. Despite the fact that the Northeast-Midwest region has 44 percent of the total population and contributes nearly half of all federal taxes, on[illegible] 19.6 percent of personnel, 20.7 percent of payroll, and 33 percent of DoD installations are located in Northeastern and Midwestern states. Conversely, the South and West's share of DoD personnel has remained at a high level since 1949, growing from 74 percent to a fiscal 1983 total of 80.4 percent.

Another distinction is made clear in Table 15, which shows the status of military personnel -- civilian or on active duty -- by region in fiscal 1983. The proportion of each varies significantly between regions. Of total DoD personnel in the South and West, approximately 64 percent were on active duty in 1983 compared to approximately 42 percent in the Northeast-Midwest region. Personnel on active duty are subject to transfer; their impact on a given locality therefore varies. Over twice as many civilians were employed by the Defense Department in the Northeast and Midwest as active duty personnel. In sharp contrast, Southern and Western states had a more equal distribution, with 86 percent of active duty personnel and 72 percent of civilian defense employees. This phenomenon may be due to the fewer number of bases located in the Northeastern and Midwestern states and the type of missions they carry out.

During the 34 years from 1949 to 1983, several states underwent massive shifts, as shown in Tables 16 and 17. While Massachusetts lost 14,638 DoD employees -- 40 percent of its total defense labor force -- California gained 107,699 -- a 47 percent increase. Figure 4 illustrates the shift in personel that has occurred since 1949. Even more staggering is the shift between 1965 and 1983; while the average number of personnel dropped by 9.7 percent nationwide, five Northeastern and Midwestern states -- Maine, Massachusetts, Minnesota, Rhode Island, and New York -- suffered losses of 45 percent or more. New York alone lost over 38,000 employees during that period. Nearly two-thirds of the states in the Northeast-Midwest region each had less than one percent of all DoD employees in 1983. If Northeastern and Midwestern states had the same share of defense personnel in 1983 as of population, the region would have had an additional 563,574 personnel.

Many installations in the region, particularly those in major urban centers, have experienced recent reductions in personnel. From 1980 to 1983, the number of personnel stationed in Duluth, Minnesota, dropped from 1,485 to 380, and the number at the Great Lakes Installation in Illinois declined by over 2,000. Reductions of 834 and 2,035 occurred in Sterling Heights, Michigan, and Chanute Air Force Base in Illinois. Chicago and Cleveland lost personnel as well. New York City, 1,831 employees lost between 1980 and 1983.

The decline in personnel in urban centers is widespead, and can have a substantial impact on those areas, particularly if a base closes altogether.

The Army recently announced plans to locate a light infantry division at Fort Drum, New York. The new division, the first created by the Army since 1975 and the first to be stationed in the Northeast since World War II, will result in the addition of approximately 7,500 soldiers and 9,700 dependents to the area. Fort Drum currently has approximately 1,900 personnel. Population in the area is projected to increase by 20 percent by the time the division is fully in place.

TABLE 15

Department of Defense Military and Civilian Personnel: Fiscal 1983

	Total DoD Personnel		Active Duty		Civilian	
Region and State	Personnel	Percent of Total	Personnel	Percent of Total	Personnel	Percent of Total
New England						
Connecticut	10,380	0.4	5,865	0.4	4,515	0.5
Maine	7,486	0.3	5,419	0.4	2,067	0.2
Massachusetts	22,307	1.0	10,385	0.8	11,922	1.3
New Hampshire	14,459	0.6	4,096	0.3	10,363	1.1
Rhode Island	8,086	0.4	3,974	0.3	4,112	0.4
Vermont	595	*	60	*	535	0.1
Total	63,313	2.7	29,799	2.2	33,514	3.6
Mid-Atlantic						
Delaware	6,717	0.3	4,935	0.4	1,782	0.2
Maryland	76,616	3.3	35,759	2.6	40,857	4.4
New Jersey	48,756	2.1	21,447	1.6	27,309	2.9
New York	41,347	1.8	22,716	1.6	18,631	2.0
Pennsylvania	61,982	2.7	7,997	0.6	53,985	5.8
Total	235,418	10.2	92,854	6.7	142,564	15.3
Midwest						
Illinois	57,880	2.5	36,289	2.6	21,591	2.3
Indiana	19,838	0.9	6,059	0.4	13,779	1.5
Iowa	1,921	0.1	459	*	1,462	0.2
Michigan	21,544	0.9	9,599	0.7	11,945	1.3
Minnesota	3,622	0.2	916	0.1	2,706	0.3
Ohio	44,491	1.9	11,834	0.9	32,657	3.5
Wisconsin	3,879	0.2	943	0.1	2,936	0.3
Total or Average	153,175	6.6	66,099	4.8	87,076	9.4
South						
Alabama	51,162	2.2	25,072	1.8	26,090	2.8
Arkansas	14,653	0.6	9,889	0.7	4,764	0.5
District of Columbia	29,616	1.3	13,342	1.0	16,274	1.7
Florida	100,677	4.4	70,872	5.1	29,805	3.2
Georgia	99,561	4.3	62,941	4.6	36,620	3.9
Kentucky	54,983	2.4	41,378	3.0	13,605	1.5
Louisiana	34,956	1.5	25,950	1.9	9,006	1.0
Mississippi	29,252	1.3	18,119	1.3	11,133	1.2
North Carolina	113,196	4.9	97,890	7.1	15,306	1.6
Oklahoma	56,624	2.5	31,875	2.3	24,749	2.7
South Carolina	70,067	3.0	50,264	3.7	19,803	2.1
Tennessee	19,484	0.8	11,831	0.9	7,653	0.8
Texas	196,205	8.5	133,406	9.7	62,799	6.7
Virginia	199,203	8.6	94,484	6.9	104,719	11.2
West Virginia	1,995	0.1	438	*	1,557	0.2
Total	1,071,634	46.4	687,751	50.0	383,883	41.2

TABLE 15 (continued)

Department of Defense Military and Civilian Personnel: Fiscal 1983

	Total DoD Personnel		Active Duty		Civilian	
Region and State	Personnel	Percent of Total	Personnel	Percent of Total	Personnel	Percent of Total
West						
Alaska	25,296	1.1	20,680	1.5	4,616	0.5
Arizona	34,157	1.5	24,432	1.8	9,725	1.0
California	337,931	14.6	204,572	14.9	133,359	14.3
Colorado	53,940	2.3	39,879	2.9	14,061	1.5
Hawaii	65,959	2.9	45,715	3.3	20,244	2.2
Idaho	7,175	0.3	5,999	0.4	1,176	0.1
Kansas	31,028	1.3	24,609	1.8	6,419	0.7
Missouri	37,819	1.6	17,685	1.3	20,134	2.2
Montana	5,279	0.2	4,160	0.3	1,119	0.1
Nebraska	16,043	0.7	12,282	0.9	3,761	0.4
Nevada	13,696	0.6	11,824	0.9	1,872	0.2
New Mexico	26,316	1.1	16,883	1.2	9,433	1.0
North Dakota	13,265	0.6	11,647	0.8	1,618	0.2
Oregon	3,812	0.2	770	0.1	3,042	0.3
South Dakota	7,734	0.3	6,515	0.5	1,219	0.1
Utah	28,397	1.2	6,241	0.5	22,156	2.4
Washington	71,816	3.1	42,570	3.1	29,246	3.1
Wyoming	4,707	0.2	3,821	0.3	886	0.1
Total	784,370	34.0	500,284	36.3	284,086	30.5
Northeast	298,731	12.9	122,653	8.9	176,078	18.9
Midwest	153,175	6.6	66,099	4.8	87,076	9.4
Northeast and Midwest	451,906	19.6	188,752	13.7	263,154	28.3
South	1,071,634	46.4	687,751	50.0	383,883	41.2
West	784,370	34.0	500,284	36.3	284,086	30.5
South and West	1,856,004	80.4	1,188,035	86.3	667,969	71.7
U.S. Total	2,307,910	100.0	1,376,787	100.0	931,123	100.0

*Less than one-tenth of one percent of the total.

SOURCE: Staff calculations from U.S. Department of Defense, *Atlas/State Data Abstract for the United States: Fiscal Year 1983* (Washington, D.C.: 1984).

TABLE 16

Department of Defense Military and Civilian Personnel: Fiscal 1949-1983[1]

Region and State	1949 Number	1949 Percent of Total	1965 Number	1965 Percent of Total	1980 Number	1980 Percent of Total	1983 Number	1983 Percent of Total
New England								
Connecticut	3,796	0.3	6,827	0.3	9,654	0.5	10,380	0.4
Maine	1,146	0.1	13,933	0.5	7,049	0.3	7,486	0.3
Massachusetts	36,945	2.9	53,259	2.1	20,959	1.0	22,307	1.0
New Hampshire	6,377	0.5	15,861	0.6	13,064	0.6	14,459	0.6
Rhode Island	547	*	15,358	0.6	7,492	0.4	8,086	0.4
Vermont	162	*	361	*	509	*	595	*
Total	48,973	3.8	105,599	4.1	58,727	2.8	63,313	2.7
Mid-Atlantic								
Delaware	299	*	8,458	0.3	6,920	0.3	6,717	0.3
Maryland	49,745	3.9	63,332	2.5	45,196	2.1	76,616	3.3
New Jersey	52,944	4.2	61,942	2.4	46,518	2.2	48,756	2.1
New York	36,981	2.9	79,725	3.1	36,180	1.7	41,347	1.8
Pennsylvania	23,900	1.9	81,975	3.2	56,958	2.7	61,982	2.7
Total	163,869	12.9	295,432	11.6	191,772	9.1	235,418	10.2
Midwest								
Illinois	60,868	4.8	75,551	3.0	61,457	2.9	57,880	2.5
Indiana	11,818	0.9	20,972	0.8	19,056	0.9	19,838	0.9
Iowa	952	0.1	2,075	0.1	1,830	0.1	1,921	0.1
Michigan	16,316	1.3	31,513	1.2	20,116	1.0	21,544	0.9
Minnesota	3,028	0.2	7,272	0.3	4,694	0.2	3,622	0.2
Ohio	11,893	0.9	55,891	2.2	42,433	2.0	44,491	1.9
Wisconsin	1,816	0.1	6,515	0.3	4,288	0.2	3,879	0.2
Total or Average	106,691	8.4	199,789	7.8	153,874	7.3	153,175	6.6
South								
Alabama	20,664	1.6	57,284	2.2	54,092	2.6	51,162	2.2
Arkansas	6,409	0.5	13,859	0.5	14,078	0.7	14,653	0.6
D.C.[2]	116,498	9.2	141,804	5.5	31,606	1.5	29,616	1.3
Florida	49,217	3.9	95,123	3.7	95,348	4.5	100,677	4.4
Georgia	62,383	4.9	127,543	5.0	108,265	5.1	99,561	4.3
Kentucky	41,238	3.2	60,951	2.4	52,159	2.5	54,983	2.4
Louisiana	18,886	1.5	40,865	1.6	31,886	1.5	34,956	1.5
Mississippi	19,138	1.5	27,496	1.1	29,383	1.4	29,252	1.3
North Carolina	26,399	2.1	97,293	3.8	98,213	4.7	113,196	4.9
Oklahoma	13,860	1.1	59,597	2.3	52,410	2.5	56,624	2.5
South Carolina	10,771	0.8	65,499	2.6	70,489	3.3	70,067	3.0
Tennessee	5,993	0.5	24,606	1.0	19,608	0.9	19,484	0.8
Texas	59,764	4.7	225,150	8.8	196,101	9.3	196,205	8.5
Virginia	22,526	1.8	104,685	4.1	105,518	5.0	199,203	8.6
West Virginia	2,055	0.2	1,654	0.1	2,083	0.1	1,995	0.1
Total	475,801	37.4	1,143,409	44.7	961,239	45.7	1,071,634	46.4

TABLE 16 (continued)

Department of Defense Military and Civilian Personnel: Fiscal 1949-1983[1]

Region and State	1949		1965		1980		1983	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
West								
Alaska	28,418	2.2	37,173	1.5	24,692	1.2	25,296	1.1
Arizona	10,063	0.8	28,420	1.1	32,569	1.5	34,157	1.5
California	230,232	18.1	351,636	13.8	317,834	15.1	337,931	14.6
Colorado	22,238	1.7	49,871	2.0	49,456	2.3	53,940	2.3
Hawaii	38,012	3.0	59,148	2.3	62,593	3.0	65,959	2.9
Idaho	748	0.1	5,843	0.2	6,795	0.3	7,175	0.3
Kansas	25,575	2.0	34,485	1.3	31,824	1.5	31,028	1.3
Missouri	15,455	1.2	45,619	1.8	37,383	1.8	37,819	1.6
Montana	3,567	0.3	10,556	0.4	5,849	0.3	5,279	0.2
Nebraska	7,964	0.6	20,403	0.8	15,726	0.7	16,043	0.7
Nevada	4,198	0.3	10,221	0.4	11,571	0.5	13,696	0.6
New Mexico	17,133	1.3	32,617	1.3	24,759	1.2	26,316	1.1
North Dakota	746	0.1	13,692	0.5	12,231	0.6	13,265	0.6
Oregon	3,024	0.2	8,375	0.3	4,123	0.2	3,812	0.2
South Dakota	715	0.1	7,917	0.3	7,322	0.3	7,734	0.3
Utah	7,682	0.6	23,977	0.9	26,914	1.3	28,397	1.2
Washington	51,785	4.1	67,857	2.7	63,741	3.0	71,816	3.1
Wyoming	9,482	0.7	5,174	0.2	4,585	0.2	4,707	0.2
Total	477,037	37.5	812,984	31.8	739,967	35.1	784,370	34.0
Northeast	212,842	16.7	401,031	15.7	250,499	11.9	298,731	12.9
Midwest	106,691	8.4	199,789	7.8	153,874	7.3	153,175	6.6
Northeast and Midwest	319,533	25.1	600,820	23.5	404,373	19.2	451,906	19.6
South	475,801	37.4	1,143,409	44.7	961,239	45.7	1,071,634	46.4
West	477,037	37.5	812,984	31.8	739,967	35.1	784,370	34.0
South and West	952,838	74.9	1,956,393	76.5	1,701,206	80.8	1,856,004	80.4
U.S. Total	1,272,371	100.0	2,557,213	100.0	2,105,579	100.0	2,307,910	100.0

*Less than one-tenth of one percent of total.

[1] Does not include undistributed personnel.

[2] For the District of Columbia, the 1949 and 1965 personnel statistics include the District of Columbia and other parts of the Washington metropolitan area (Virginia and Maryland portions).

SOURCES: Staff calculations from U.S. Department of Defense, Defense Personnel and Total Population in the Continental United States by State (Washington, D.C.: 1949 and 1965); and Distribution of Personnel by State and by Selected Location (Washington, D.C.: September 30, 1983).

TABLE 17

Change in Department of Defense Military Personnel: Fiscal 1949-1983[1]

	1980-1983		1965-1983		1949-1983	
Region and State	Number	Percent	Number	Percent	Number	Percent
New England						
Connecticut	726	7.5	3,553	52.0	6,584	173.4
Maine	437	6.2	-6,447	-46.3	6,340	553.2
Massachusetts	1,348	6.4	-30,952	-58.1	-14,638	-39.6
New Hampshire	1,395	10.7	-1,402	-8.8	8,082	126.7
Rhode Island	594	7.9	-7,272	-47.3	7,539	1,378.2
Vermont	86	16.9	234	64.8	433	267.3
Total or Average	4,586	7.8	-42,286	-40.0	14,340	29.3
Mid-Atlantic						
Delaware	-203	-2.9	-1,741	-20.6	6,418	2,146.5
Maryland	31,420	69.5	13,284	21.0	26,871	54.0
New Jersey	2,238	4.8	-13,186	-21.3	-4,188	-7.9
New York	5,167	14.3	-38,378	-48.1	4,366	11.8
Pennsylvania	5,024	8.8	-19,993	-24.4	38,082	159.3
Total or Average	43,646	22.8	-60,014	-20.3	71,549	43.7
Midwest						
Illinois	-3,577	-5.8	-17,671	-23.4	-2,988	-4.9
Indiana	782	4.1	-1,134	-5.4	8,020	67.9
Iowa	91	5.0	-154	-7.4	969	101.8
Michigan	1,428	7.1	-9,969	-31.6	5,228	32.0
Minnesota	-1,072	-22.8	-3,650	-50.2	594	19.6
Ohio	2,058	4.8	-11,400	-20.4	32,598	274.1
Wisconsin	-409	-9.5	-2,636	-40.5	2,063	113.6
Total or Average	-699	-.5	-46,614	-23.3	46,484	43.6
South						
Alabama	-2,930	-5.4	-6,122	-10.7	30,498	147.6
Arkansas	575	4.1	794	5.7	8,244	128.6
D.C.[2]	-1,990	-6.3	-112,188	-79.1	-86,882	-74.6
Florida	5,329	5.6	5,554	5.8	51,460	104.6
Georgia	-8,704	-8.0	-27,982	-21.9	37,178	59.6
Kentucky	2,824	5.4	-5,968	-9.8	13,745	33.3
Louisiana	3,070	9.6	-5,909	-14.5	16,070	85.1
Mississippi	-131	-.4	1,756	6.4	10,114	52.8
North Carolina	14,983	15.3	15,903	16.3	86,797	328.8
Oklahoma	4,214	8.0	-2,973	-5.0	42,764	308.5
South Carolina	-422	-.6	4,568	7.0	59,296	550.5
Tennessee	-124	-.6	-5,122	-20.8	13,491	225.1
Texas	104	0.1	-28,945	-12.9	136,441	228.3
Virginia	93,685	88.8	94,518	90.3	176,677	784.3
West Virginia	-88	-4.2	341	20.6	-60	-2.9
Total or Average	110,395	11.5	-71,775	-6.3	595,833	125.2

TABLE 17 (continued)

Change in Department of Defense Military Personnel: Fiscal 1949-1983[1]

Region and State	1980-1983 Number	1980-1983 Percent	1965-1983 Number	1965-1983 Percent	1949-1983 Number	1949-1983 Percent
West						
Alaska	604	2.4	-11,877	-32.0	-3,122	-11.0
Arizona	1,588	4.9	5,737	20.2	24,094	239.4
California	20,097	6.3	-13,705	-3.9	107,699	46.8
Colorado	4,484	9.1	4,069	8.2	31,702	142.6
Hawaii	3,366	5.4	6,811	11.5	27,947	73.5
Idaho	380	5.6	1,332	22.8	6,427	859.2
Kansas	-796	-2.5	-3,457	-10.0	5,453	21.3
Missouri	436	1.2	-7,800	-17.1	22,364	144.7
Montana	-570	-9.7	-5,277	-50.0	1,712	48.0
Nebraska	317	2.0	-4,360	-21.4	8,079	101.4
Nevada	2,125	18.4	3,475	34.0	9,498	226.3
New Mexico	1,557	6.3	-6,301	-19.3	9,183	53.6
North Dakota	1,034	8.5	-427	-3.1	12,519	1,678.2
Oregon	-311	-7.5	-4,563	-54.5	788	26.1
South Dakota	412	5.6	-183	-2.3	7,019	981.7
Utah	1,483	5.5	4,420	18.4	20,715	269.7
Washington	8,075	12.7	3,959	5.8	20,031	38.7
Wyoming	122	2.7	-467	-9.0	-4,775	-50.4
Total or Average	44,403	6.0	-28,614	-3.5	307,333	64.4
Northeast	48,232	19.3	-102,300	-25.5	85,889	40.4
Midwest	-699	-.5	-46,614	-23.3	46,484	43.6
Northeast and Midwest	47,533	11.8	-148,914	-24.8	132,373	41.4
South	110,395	11.5	-71,775	-6.3	595,833	125.2
West	44,403	6.0	-28,614	-3.5	307,333	64.4
South and West	154,798	9.1	-100,389	-5.1	903,166	94.8
U.S. Total	202,331	9.6	-249,303	-9.7	1,035,539	81.4

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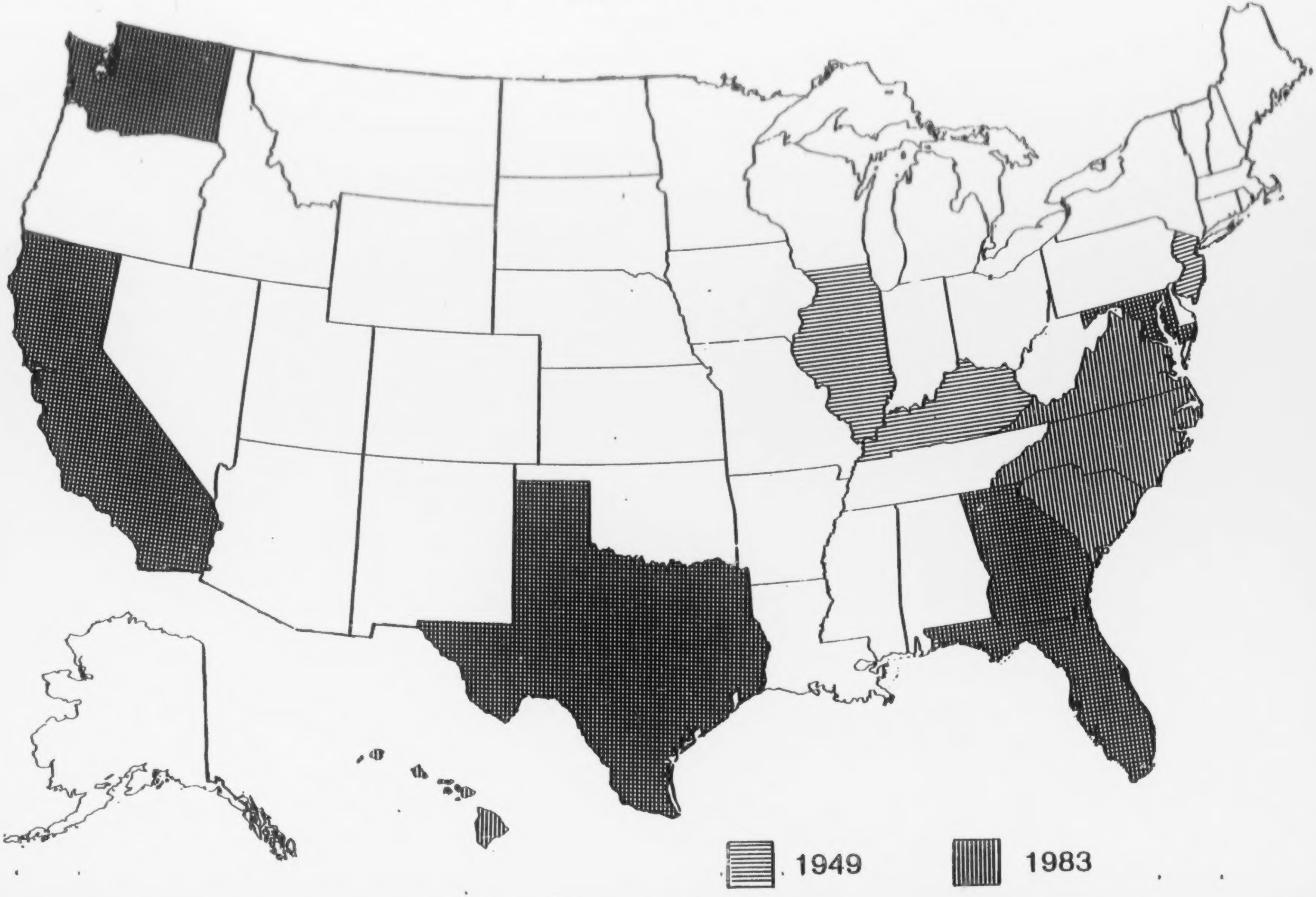
[1] Does not include undistributed personnel.

[2] For the District of Columbia, the 1949 and 1965 personnel statistics include the District of Columbia and other parts of the Washington metropolitan area (Virginia and Maryland portions).

SOURCES: Staff calculations from U.S. Department of Defense, Defense Personnel and Total Population in the Continental United States by State (Washington, D.C.: 1949 and 1965); and Distribution of Personnel by State and by Selected Location (Washington, D.C.: September 30, 1983).

FIGURE 4
TEN STATES WITH THE LARGEST NUMBER OF DOD PERSONNEL, 1949 AND 1983



D. Payroll

Payroll includes all wages and salaries for Department of Defense personnel, active duty and civilian. In Table 18, fiscal 1983 payroll expenditures are broken down to include Reserve, National Guard, and retired personnel as well as civilian and active duty military. The historical analysis of payroll expenditures in Table 19, however, includes only payroll for active duty military and civilian personnel. Statistics on payroll for the other categories in the earlier years were not available.

As a result of the regional imbalances in the location of DoD personnel, payroll expenditures for military and civilian employees are heavily tilted toward the South and West. The substantial dollar value of the DoD payroll (over $68 billion in fiscal 1983) and its multiplier effect on local economies cause significant economic disparities among the regions. Expenditures on both civilian and military payrolls result in corresponding direct effects on numerous associated industries. In addition, a loss of payroll funds translates directly into a loss of investment for local economies and in some cases a decline in the tax base of an area.

Between 1950 and 1983, the DoD payroll grew by more than $42 billion, or 978 percent. As these expenditures grew, so did the gap between the amounts received in the South and West and the Northeast and Midwest. In 1983, approximately $9.2 billion or 13.4 percent of all payroll dollars were spent in the Northeast. The Midwest received $5.0 billion, or 7 percent of all payroll expenditures. In contrast, Southern and Western states received $54 billion, approximately 80 percent of the DoD payroll budget and nearly four times the amount received in the entire Northeast-Midwest region. Southern states alone received $31.5 billion, close to half the entire Defense Department payroll (see Table 18). In addition, the South and West also claimed nearly 78 percent of all payroll funds for National Guard, Reserve, and retired personnel.

Over a 33-year period, the Northeast-Midwest region's share of payroll dollars declined from 28.3 percent in 1950 to 27.2 percent in 1965 to only 21.7 percent in 1983 (see Table 19). Almost half the states in the region increased their payroll receipts over that span by less than the national average of 945 percent. New York, for example, increased its payroll receipts by only $596 million; in contrast, more than half the states in the South and West had payroll increases of over $700 million. Of the total increase of $41.5 billion in the Defense Department military and civilian payroll between 1950 and 1983, 21 percent ($8.7 billion) was expended in the Northeast-Midwest region, while 79 percent ($32.8 billion) was expended in the South and West (see Table 20).

TABLE 18

Total Department of Defense Payroll: Fiscal 1983
(in thousands of dollars)

Region and State	Total DoD Payroll[1]		Active Duty and Civilian		Reserve, National Guard, and Retired	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
New England						
Connecticut	459,609	0.7	223,771	0.5	127,098	0.7
Maine	284,080	0.4	184,721	0.4	99,359	0.5
Massachusetts	806,152	1.2	505,928	1.1	207,325	1.1
New Hampshire	425,353	0.6	330,983	0.7	94,370	0.5
Rhode Island	295,571	0.4	222,258	0.5	73,313	0.4
Vermont	50,605	0.1	15,204	*	35,399	0.2
Total	2,321,370	3.4	1,482,865	3.2	636,864	3.5
Mid-Atlantic						
Delaware	84,374	0.1	125,330	0.3	59,044	0.3
Maryland	2,157,081	3.1	1,697,558	3.7	459,823	2.5
New Jersey	1,343,349	2.0	1,027,567	2.2	315,782	1.7
New York	1,184,869	1.7	795,272	1.7	389,597	2.1
Pennsylvania	2,075,778	3.0	1,470,633	3.2	605,145	3.3
Total	6,845,451	10.0	5,116,360	11.1	1,829,391	10.1
Midwest						
Illinois	1,480,095	2.2	1,136,224	2.5	343,871	1.9
Indiana	695,662	1.0	451,593	1.0	244,069	1.3
Iowa	142,917	0.2	45,879	0.1	97,038	0.5
Michigan	698,750	1.0	467,322	1.0	231,428	1.3
Minnesota	243,168	0.4	88,783	0.2	154,385	0.8
Ohio	1,488,858	2.2	1,112,635	2.4	376,223	2.1
Wisconsin	269,671	0.4	84,524	0.2	185,147	1.0
Total	5,019,121	7.3	3,386,960	7.4	1,632,161	9.0
South						
Alabama	1,569,398	2.3	1,096,687	2.4	473,251	2.6
Arkansas	515,335	0.8	278,418	0.6	236,917	1.3
District of Columbia	979,733	1.4	789,567	1.7	190,166	1.0
Florida	3,896,181	5.7	2,371,340	5.2	1,524,841	8.4
Georgia	2,588,916	3.8	1,884,157	4.1	704,759	3.9
Kentucky	1,147,990	1.7	918,763	2.0	229,227	1.3
Louisiana	950,075	1.4	637,474	1.4	312,601	1.7
Mississippi	830,547	1.2	599,400	1.3	231,147	1.3
North Carolina	2,465,472	3.6	1,934,284	4.2	531,188	2.9
Oklahoma	1,419,467	2.1	1,076,116	2.3	343,351	1.9
South Carolina	2,009,967	2.9	1,538,434	3.3	471,533	2.6
Tennessee	709,367	1.0	360,040	0.8	349,327	1.9
Texas	5,327,429	7.8	3,619,060	7.9	1,708,369	9.4
Virginia	6,914,898	10.1	5,875,891	12.8	1,039,007	5.7
West Virginia	139,361	0.2	49,642	0.1	89,719	0.5
Total	31,464,136	45.8	23,029,273	50.1	8,435,403	46.4

TABLE 18 (continued)

Total Department of Defense Payroll: Fiscal 1983
(in thousands of dollars)

Region and State	Total DoD Payroll[1] Amount	Total DoD Payroll[1] Percent of Total	Active Duty and Civilian Amount	Active Duty and Civilian Percent of Total	Reserve, National Guard, and Retired Amount	Reserve, National Guard, and Retired Percent of Total
West						
Alaska	571,881	0.8	509,184	1.1	62,697	0.3
Arizona	1,066,299	1.6	652,461	1.4	413,838	2.3
California	10,665,918	15.5	3,858,546	8.4	2,397,372	13.2
Colorado	1,411,733	2.1	946,826	2.1	464,907	2.6
Hawaii	1,726,050	2.5	1,566,026	3.4	160,024	0.9
Idaho	209,497	0.3	125,326	0.3	84,171	0.5
Kansas	768,643	1.1	567,770	1.2	200,873	1.1
Missouri	1,095,154	1.6	745,824	1.6	349,330	1.9
Montana	151,920	0.2	92,924	0.2	58,996	0.3
Nebraska	469,483	0.7	356,228	0.8	113,255	0.6
Nevada	384,146	0.6	242,335	0.5	141,811	0.8
New Mexico	726,676	1.1	546,520	1.2	180,156	1.0
North Dakota	257,015	0.4	224,749	0.5	32,266	0.2
Oregon	292,847	0.4	97,278	0.2	195,569	1.1
South Dakota	174,303	0.3	130,545	0.3	43,758	0.2
Utah	719,265	1.0	605,424	1.3	113,841	0.6
Washington	2,166,575	3.2	1,573,018	3.4	593,593	3.3
Wyoming	119,206	0.2	82,983	0.2	36,2[illegible]	0.2
Total	22,976,611	33.5	12,923,967	28.1	5,642,680	31.0
Northeast	9,166,821	13.4	6,599,225	14.4	2,466,255	13.6
Midwest	5,019,121	7.3	3,386,960	7.4	1,632,161	9.0
Northeast and Midwest	14,185,942	20.7	9,986,185	21.7	4,098,416	22.5
South	31,464,136	45.8	23,029,273	50.1	8,435,403	46.4
West	22,976,611	33.5	12,923,967	28.1	5,642,680	31.0
South and West	54,440,747	79.3	35,953,240	78.3	14,078,083	77.5
U.S. Total	68,626,689	100.0	45,939,425	100.0	18,176,499	100.0

*Less than one-tenth of one percent of the total.

[1] These figures include active duty military and civilian, reserve, National Guard, and retired pay.

SOURCE: Staff calculations from U.S. Department of Defense, Atlas/State Data Abstract for the United States: Fiscal Year 1983 (Washington, D.C.: 1984).

TABLE 19

Department of Defense Military and Civilian Payroll: Fiscal 1950-1983[1]
(in thousands of dollars)

Region and State	1950 Amount	1950 Percent of Total	1965 Amount	1965 Percent of Total	1981 Amount	1981 Percent of Total	1983 Amount	1983 Percent of Total
New England								
Connecticut	10,341	0.2	46,763	0.3	277,842	0.6	223,771	0.5
Maine	2,714	0.1	75,208	0.5	164,446	0.4	184,721	0.4
Massachusetts	99,478	2.3	332,286	2.3	442,246	1.0	505,928	1.1
New Hampshire	18,983	0.4	102,134	0.7	282,523	0.6	330,983	0.7
Rhode Island	34,864	0.8	94,575	0.7	192,813	0.4	222,258	0.5
Vermont	586	*	1,864	*	12,523	*	15,204	*
Total	166,966	3.8	652,830	4.5	1,372,393	3.1	1,482,865	3.2
Mid-Atlantic								
Delaware	686	*	52,235	0.4	121,752	0.3	125,330	0.3
Maryland	172,053	3.9	550,801	3.8	1,453,246	3.3	1,697,558	3.7
New Jersey	128,944	2.9	350,400	2.4	919,057	2.1	1,027,567	2.2
New York	198,882	4.5	527,300	3.6	657,660	1.5	795,272	1.7
Pennsylvania	201,869	4.6	560,535	3.9	1,220,542	2.8	1,470,633	3.2
Total	702,434	16.0	2,041,271	14.0	4,372,257	10.0	5,116,360	11.1
Midwest								
Illinois	160,265	3.6	421,109	2.9	1,078,971	2.5	1,136,224	2.5
Indiana	34,998	0.8	129,380	0.9	382,954	0.9	451,593	1.0
Iowa	2,599	0.1	11,131	0.1	37,916	0.1	45,879	0.1
Michigan	41,270	0.9	190,191	1.3	427,684	1.0	467,322	1.0
Minnesota	8,077	0.2	38,464	0.3	95,438	0.2	88,783	0.2
Ohio	122,584	2.8	431,388	3.0	1,016,173	2.3	1,112,635	2.4
Wisconsin	4,594	0.1	36,887	0.3	73,228	0.2	84,524	0.2
Total	374,387	8.5	1,258,550	8.7	3,112,364	7.1	3,386,960	7.4
South								
Alabama	58,555	1.3	359,566	2.5	964,492	2.2	1,096,687	2.4
Arkansas	15,764	0.4	71,740	0.5	258,898	0.6	278,418	0.6
D.C.	139,537	3.2	367,037	2.5	731,303	1.7	789,567	1.7
Florida	133,508	3.0	531,088	3.7	2,061,490	4.7	2,371,340	5.2
Georgia	146,795	3.3	648,123	4.5	1,633,527	3.7	1,884,157	4.1
Kentucky	89,100	2.0	269,648	1.9	754,479	1.7	918,763	2.0
Louisiana	49,565	1.1	184,756	1.3	536,938	1.2	637,474	1.4
Mississippi	49,617	1.1	145,529	1.0	580,789	1.3	599,400	1.3
North Carolina	136,755	3.1	421,456	2.9	1,650,453	3.8	1,934,284	4.2
Oklahoma	89,234	2.0	337,375	2.3	921,522	2.1	1,076,116	2.3
South Carolina	72,266	1.6	299,077	2.1	1,280,941	2.9	1,538,434	3.3
Tennessee	51,375	1.2	128,749	0.9	313,393	0.7	360,040	0.8
Texas	396,972	9.0	1,218,153	8.4	3,377,355	7.7	3,619,060	7.9
Virginia	352,408	8.0	965,086	6.6	4,706,214	10.8	5,875,891	12.8
West Virginia	6,022	0.1	3,673	*	41,187	0.1	49,642	0.1
Total	1,787,473	40.7	5,951,056	40.9	19,812,981	45.4	23,029,273	50.1

TABLE 19 (continued)

Department of Defense Military and Civilian Payroll: Fiscal 1950-1983[1]
(in thousands of dollars)

Region and State	1950		1965		1981		1983	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
West								
Alaska	70,154	1.6	197,463	1.4	447,167	1.0	509,184	1.1
Arizona	26,060	0.6	153,545	1.1	604,450	1.4	652,461	1.4
California	630,198	14.3	2,055,919	14.1	6,897,006	15.8	3,858,546	8.4
Colorado	53,689	1.2	276,017	1.9	865,075	2.0	946,826	2.1
Hawaii	100,073	2.3	324,776	2.2	1,302,332	3.0	1,566,026	3.4
Idaho	1,947	*	33,322	0.2	122,483	0.3	125,326	0.3
Kansas	55,479	1.3	193,811	1.3	523,485	1.2	567,770	1.2
Missouri	45,673	1.0	235,916	1.6	644,893	1.5	745,824	1.6
Montana	8,987	0.2	57,300	0.4	107,087	0.2	92,924	0.2
Nebraska	21,938	0.5	128,280	0.9	359,036	0.8	356,228	0.8
Nevada	11,326	0.3	56,533	0.4	229,308	0.5	242,335	0.5
New Mexico	42,492	1.0	189,843	1.3	505,265	1.2	546,520	1.2
North Dakota	2,387	0.1	68,217	0.5	230,851	0.5	224,749	0.5
Oregon	12,628	0.3	49,116	0.3	81,507	0.2	97,278	0.2
South Dakota	10,594	0.2	44,269	0.3	137,666	0.3	130,545	0.3
Utah	44,838	1.0	164,825	1.1	563,021	1.3	605,424	1.3
Washington	202,900	4.6	376,360	2.6	1,312,371	3.0	1,573,018	3.4
Wyoming	23,492	0.5	30,337	0.2	84,748	0.2	82,983	0.2
Total	1,364,855	31.0	4,635,849	31.9	15,017,751	34.4	12,923,967	28.1
Northeast	869,400	19.8	2,694,101	18.5	5,744,650	13.1	6,599,225	14.4
Midwest	374,387	8.5	1,258,550	8.7	3,112,364	7.1	3,386,960	7.4
Northeast and Midwest	1,243,787	28.3	3,952,651	27.2	8,857,014	20.3	9,986,185	21.7
South	1,787,473	40.7	5,951,056	40.9	19,812,981	45.4	23,029,273	50.1
West	1,364,855	31.0	4,635,849	31.9	15,017,751	34.4	12,923,967	28.1
South and West	3,152,328	71.7	10,586,905	72.8	34,830,732	79.7	35,953,240	78.3
U.S. Total	4,396,115	100.0	14,539,556	100.0	43,687,746	100.0	45,939,425	100.0

*Less than one-tenth of one percent.

[1] Payroll figures include active duty military and civilian DoD employees. They do not include Reserve, National Guard, or retired pay.

SOURCES: Staff calculations from U.S. Department of Defense, Office of the Assistant Secretary of Defense (Comptroller), Director of Information Operations, "Estimated Payroll for Military and Civilian Personnel" (Washington, D.C.: 1950 and 1965); American Forces Information Service, Defense Almanac '82 (Arlington, Virginia: September 1982); and Department of Defense, Atlas/State Data Abstract for the United States: Fiscal Year 1983 (Washington, D.C.: 1984).

TABLE 20

Change In Department of Defense Military and Civilian Payroll: Fiscal 1950-1983[1]
(in thousands of dollars)

	1981-1983		1965-1983		1950-1983	
Region and State	Amount	Percent	Amount	Percent	Amount	Percent
New England						
Connecticut	-54,071	-19.5	177,008	378.5	213,430	2,063.9
Maine	20,275	12.3	109,513	145.6	182,007	6,706.2
Massachusetts	63,682	14.4	173,642	52.3	406,450	408.6
New Hampshire	48,460	17.2	228,849	224.1	312,000	1,643.6
Rhode Island	29,445	15.3	127,683	135.0	187,394	537.5
Vermont	2,681	21.4	13,340	715.7	14,618	2,494.5
Total or Average	110,472	8.0	830,035	127.1	1,315,899	788.1
Mid-Atlantic						
Delaware	3,578	2.9	73,095	139.9	124,644	18,169.7
Maryland	244,312	16.8	1,146,757	208.2	1,525,505	886.6
New Jersey	108,510	11.8	677,167	193.3	898,623	696.9
New York	137,612	20.9	267,972	50.8	596,390	299.9
Pennsylvania	250,091	20.5	910,098	162.4	1,268,764	628.5
Total or Average	744,103	17.0	3,075,089	150.6	4,413,926	628.4
Midwest						
Illinois	57,253	5.3	715,115	169.8	975,959	609.0
Indiana	68,639	17.9	322,213	249.0	416,595	1,190.3
Iowa	7,963	21.0	34,748	312.2	43,280	1,665.3
Michigan	39,638	9.3	277,131	145.7	426,052	1,032.4
Minnesota	-6,655	-7.0	50,319	130.8	80,706	999.2
Ohio	96,462	9.5	681,247	157.9	990,051	807.7
Wisconsin	11,296	15.4	47,637	129.1	79,930	1,739.9
Total or Average	274,596	8.8	2,128,410	169.1	3,012,573	804.7
South						
Alabama	132,195	13.7	737,121	205.0	1,038,132	1,772.9
Arkansas	19,520	7.5	206,678	288.1	262,654	1,666.2
District of Columbia	58,264	8.0	422,530	115.1	650,030	465.8
Florida	309,850	15.0	1,840,252	346.5	2,237,832	1,676.2
Georgia	250,630	15.3	1,236,034	190.7	1,737,362	1,183.5
Kentucky	164,284	21.8	649,115	240.7	829,663	931.2
Louisiana	100,536	18.7	452,718	245.0	587,909	1,186.1
Mississippi	18,611	3.2	453,871	311.9	549,783	1,108.1
North Carolina	283,831	17.2	1,512,828	359.0	1,797,529	1,314.4
Oklahoma	154,594	16.8	738,741	219.0	986,882	1,105.9
South Carolina	257,493	20.1	1,239,357	414.4	1,466,168	2,028.8
Tennessee	46,647	14.9	231,291	179.6	308,665	600.8
Texas	241,705	7.2	2,400,907	197.1	3,222,088	811.7
Virginia	1,169,677	24.9	4,910,805	508.8	5,523,483	1,567.4
West Virginia	8,455	20.5	45,969	1,251.5	43,620	724.3
Total or Average	3,216,292	16.2	17,078,217	287.0	21,241,800	1,188.4

TABLE 20 (continued)

Change in Department of Defense Military and Civilian Payroll: Fiscal 1950-1983[1]
(in thousands of dollars)

Region and State	1981-1983 Amount	1981-1983 Percent	1965-1983 Amount	1965-1983 Percent	1950-1983 Amount	1950-1983 Percent
West						
Alaska	62,017	13.9	311,721	157.9	439,030	625.8
Arizona	48,011	7.9	498,916	324.9	626,401	2,403.7
California	-3,038,460	-44.1	1,802,627	87.7	3,228,348	512.3
Colorado	81,751	9.5	670,809	243.0	893,137	1,663.5
Hawaii	263,694	20.2	1,241,250	382.2	1,465,953	1,464.9
Idaho	2,843	2.3	92,004	276.1	123,379	6,336.9
Kansas	44,285	8.5	373,959	193.0	512,291	923.4
Missouri	100,931	15.7	509,908	216.1	700,151	1,533.0
Montana	-14,163	-13.2	35,624	62.2	83,937	934.0
Nebraska	-2,808	-.8	227,948	177.7	334,290	1,523.8
Nevada	13,027	5.7	185,802	328.7	231,009	2,039.6
New Mexico	41,255	8.2	356,677	187.9	504,028	1,186.2
North Dakota	-6,102	-2.6	156,532	229.5	222,362	9,315.5
Oregon	15,771	19.3	48,162	98.1	84,650	670.3
South Dakota	-7,121	-5.2	86,276	194.9	119,951	1,132.3
Utah	42,403	7.5	440,599	267.3	560,586	1,250.2
Washington	260,647	19.9	1,196,658	318.0	1,370,118	675.3
Wyoming	-1,765	-2.1	52,646	173.5	59,491	253.2
Total or Average	-2,093,784	-13.9	8,288,118	178.8	11,559,112	846.9
Northeast	854,575	14.9	3,905,124	145.0	5,729,825	659.1
Midwest	274,596	8.8	2,128,410	169.1	3,012,573	804.7
Northeast and Midwest	1,129,171	12.7	6,033,534	152.6	8,742,398	702.9
South	3,216,292	16.2	17,078,217	287.0	21,241,800	1,188.4
West	-2,093,784	-13.9	8,288,118	178.8	11,559,112	846.9
South and West	1,122,508	3.2	25,366,335	239.6	32,800,912	1,040.5
U.S. Total	2,251,679	5.2	31,399,869	216.0	41,543,310	945.0

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[1] Payroll figures include active duty military and civilian DoD employees. They do not include Reserve, National Guard, or retired pay.

SOURCES: Staff calculations from U.S. Department of Defense, Office of the Assistant Secretary of Defense (Comptroller), Director of Information Operations, "Estimated Payroll for Military and Civilian Personnel" (Washington, D.C.: 1950 and 1965); American Forces Information Service, Defense Almanac '82 (Arlington, Virginia: September 1982); and Department of Defense, Atlas/State Data Abstract for the United States: Fiscal Year 1983 (Washington, D.C.: 1984).

E. Military Construction

The Department of Defense military construction budget provides for all new buildings, additions, and structural improvements other than normal operations and maintenance work. Funds are appropriated by individual project; therefore, military construction spending patterns by state differ considerably from year to year. This budget function does, however, accurately track DoD's commitment to primary installations (see Table 21).

Although military construction comprises only a small portion of the DoD budget (approximately $4.1 billion in fiscal 1985), the spending pattern for such capital investment reflects general trends in defense spending over the past 25 years. Even more important, the flow of construction dollars to and from a base can be indicative of a base's livelihood. The fiscal 1985 total military construction budget allocates nearly the same small share of dollars to the Northeast-Midwest region -- approximately 17.1 percent -- as in 1960 (see Table 22). Despite the fact that the military construction budget more than doubled between fiscal 1981 and 1985, and that the capital improvement needs of the older bases in the region have increased, the region's share of the national total actually declined from its 1981 level of 20 percent. The Midwest, in particular, experienced drastic reductions during this period, with its share dropping from 7.5 percent to 3.9 percent of the national total. Figure 5 illustrates the ten winners and losers in military construction between 1981 and 1985. Michigan's share for example, declined severely during this period, from 2.4 percent in fiscal 1981 to 0.6 percent in fiscal 1985.

The traditionally low level of military construction expenditures in the Northeast and Midwest has had a significant impact on the older military bases located there. In addition, this pattern may place bases in the region at a distinct disadvantage in the placement of advanced and highly technical operations and equipment. Despite the increasing capital improvement needs of older Northeastern and Midwestern military facilities, construction dollars continually have been flowing away from the region. The 33 percent of principal installations located in the region are projected to receive only 15 percent of the military construction budget in fiscal 1985. Between 1969 and 1979, DoD closed 477 U.S. military bases. Of these, 208 facilities -- approximately 44 percent -- were in the Northeast and Midwest (see Figure 8 in Section F). As a result, fewer than 35 percent of all military facilities were located in the region in 1983.

A recent study conducted by the Center for Naval Analyses, Tri-Service Analysis of BOS Costs, found that DoD spends more in total dollars on bases in the South and West than in the Northeast and Midwest. However, in terms of cost per base, and given that base characteristics are held constant, more funds are spent on the bases in the Northeast and Midwest. The study did not address the reasons bases in the Northeast-Midwest region required more funding; however, Center for Naval Analyses representatives suggested that age and increased maintenance costs are primary factors. Although base operating systems costs are not and do not include military construction funds, they do underscore the characteristics and needs of military installations in the Northeast and Midwest.

DoD projects that in fiscal 1985, California will receive nearly $77.6 million more in military construction dollars than the entire Northeast-Midwest region. California has one-third as many military installations as the

Northeast and Midwest, yet will receive 12.3 percent more in fiscal 1985 funds for military construction. This disproportionate distribution of military construction dollars is illustrated in Figure 6, which shows the Northeast-Midwest region's share of fiscal 1985 dollars is less than half that of the South or the West. If they were distributed in a more equitable manner, military construction funds could play an important strategic role in strengthening bases in the Northeast and Midwest and using them more effectively.

TABLE 21

Department of Defense Military Construction, Installations, and Personnel: Fiscal 1983

Region and State	Military Construction[1] (in thousands of dollars)		Principal Installations		Personnel[2]	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
New England						
Connecticut	33,058	0.8	10	1.6	10,380	0.4
Maine	46,994	1.1	7	1.1	7,486	0.3
Massachusetts	13,160	0.3	18	2.9	22,307	1.0
New Hampshire	10,726	0.3	5	0.8	14,459	0.6
Rhode Island	34,531	0.8	4	0.6	8,086	0.4
Vermont	*	0.0	2	0.3	595	*
Total	138,469	3.4	46	7.4	63,313	2.7
Mid-Atlantic						
Delaware	2,106	0.1	2	0.3	6,717	0.3
Maryland	139,820	3.4	24	3.9	76,616	3.3
New Jersey	49,318	1.2	15	2.4	48,756	2.1
New York	38,622	0.9	29	4.7	41,347	1.8
Pennsylvania	69,044	1.7	20	3.2	51,982	2.7
Total	298,910	7.3	90	14.5	235,418	10.2
Midwest						
Illinois	86,528	2.1	15	2.4	57,880	2.5
Indiana	29,275	0.7	8	1.3	19,838	0.9
Iowa	1,229	*	5	0.8	1,921	0.1
Michigan	27,286	0.7	12	1.9	21,544	0.9
Minnesota	4,700	0.1	5	0.8	3,622	0.2
Ohio	37,307	0.9	19	3.1	44,491	1.9
Wisconsin	5,919	0.1	5	0.8	3,879	0.2
Total	192,244	4.7	69	11.1	153,175	6.6
South						
Alabama	35,231	0.9	12	1.9	51,162	2.2
Arkansas	6,580	0.2	10	1.6	14,653	0.6
District of Columbia	43,162	1.1	1	0.2	29,616	1.3
Florida	109,823	2.7	29	4.7	100,677	4.4
Georgia	345,167	8.4	18	2.9	99,561	4.3
Kentucky	64,286	1.6	6	1.0	54,983	2.4
Louisiana	82,832	2.0	8	1.3	34,956	1.5
Mississippi	62,489	1.5	12	1.9	29,252	1.3
North Carolina	180,105	4.4	13	2.1	113,196	4.9
Oklahoma	54,749	1.3	8	1.3	56,624	2.5
South Carolina	109,155	2.7	11	1.8	70,067	3.0
Tennessee	24,026	0.6	6	1.0	19,484	0.8
Texas	288,115	7.0	35	5.6	196,205	8.5
Virginia	290,815	7.1	34	5.5	199,203	8.6
West Virginia	3,300	0.1	4	0.6	1,995	0.1
Total or Average	1,699,835	41.6	207	33.3	1,071,634	46.4

TABLE 21 (continued)

- Department of Defense Military Construction, Installations, and Personnel: Fiscal 1983

	Military Construction[1] (in thousands of dollars)		Principal Installations		Personnel[2]	
Region and State	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
West						
Alaska	102,871	2.5	11	1.8	25,296	1.1
Arizona	59,175	1.4	10	1.6	34,157	1.5
California	707,232	17.3	76	12.2	337,931	14.6
Colorado	99,110	2.4	13	2.1	53,940	2.3
Hawaii	240,370	5.9	18	2.9	65,959	2.9
Idaho	2,853	0.1	3	0.5	7,175	0.3
Kansas	44,800	1.1	9	1.4	31,028	1.3
Missouri	12,811	0.3	10	1.6	37,819	1.6
Montana	3,975	0.1	3	0.5	5,279	0.2
Nebraska	51,100	1.2	3	0.5	16,043	0.7
Nevada	40,330	1.0	7	1.1	13,696	0.6
New Mexico	28,866	0.7	7	1.1	26,316	1.1
North Dakota	40,435	1.0	4	0.6	13,265	0.6
Oregon	5,650	0.1	6	1.0	3,812	0.2
South Dakota	55,932	1.4	3	0.5	7,734	0.3
Utah	46,903	1.1	7	1.1	28,397	1.2
Washington	106,806	2.6	17	2.7	71,816	3.1
Wyoming	111,360	2.7	2	0.3	4,707	0.2
Total	1,760,579	43.0	209	33.7	784,370	34.0
Northeast	437,379	10.7	136	21.9	298,731	12.9
Midwest	192,244	4.7	69	11.1	153,175	6.6
Northeast and Midwest	629,623	15.4	205	33.0	451,906	19.6
South	1,699,835	41.6	207	33.3	1,071,634	46.4
West	1,760,579	43.0	209	33.7	784,370	34.0
South and West	3,460,414	84.6	416	67.0	1,856,004	80.4
U.S. Total	4,090,037	100.0	621	100.0	2,307,910	100.0

*Less than one-tenth of one percent.

[1] Figures are Military Construction Authorization, Fiscal 1985.

[2] Figures include active duty military and civilian personnel. They do not include undistributed personnel.

SOURCES: U.S. Congress, Continuing Resolution Bill, October 1984; staff calculations from U.S. Department of Defense, Distribution of Personnel By State and By Selected Locations (Washington, D.C.: September 30, 1983).

TABLE 22

Department of Defense Military Construction Awards: Fiscal 1960-1985
(in thousands of dollars)

Region and State	1960 Amount	1960 Percent of Total	1970 Amount	1970 Percent of Total	1981 Amount	1981 Percent of Total	1985[1] Amount	1985[1] Percent of Total
New England								
Connecticut	3,200	0.3	300	*	31,698	1.6	37,308	0.9
Maine	3,800	0.4	900	0.1	40,993	2.1	32,794	0.7
Massachusetts	4,700	0.5	8,600	1.2	17,490	0.9	13,160	0.3
New Hampshire	7,200	0.7	700	0.1	16,337	0.8	10,726	0.3
Rhode Island	9,200	0.9	5,200	0.7	5,127	0.3	34,531	0.8
Vermont	0	*	0	*	220	*	0	*
Total	28,100	2.8	15,700	2.2	111,865	5.6	128,519	3.1
Mid-Atlantic								
Delaware	400	0.0	7,500	1.0	1,300	0.1	2,106	0.1
Maryland	34,200	3.4	30,900	4.3	44,715	2.2	148,280	3.6
New Jersey	1,500	0.2	9,600	1.3	16,023	0.8	49,318	1.2
New York	28,600	2.9	18,700	2.6	49,026	2.5	65,772	1.6
Pennsylvania	3,300	0.3	17,400	2.4	30,211	1.5	89,144	2.2
Total	68,000	6.8	84,100	11.7	141,275	7.1	354,620	8.6
Midwest								
Illinois	15,700	1.6	11,200	1.6	42,518	2.1	105,928	2.6
Indiana	1,600	0.2	4,500	0.6	17,188	0.9	29,275	0.7
Iowa	0	*	500	0.1	5,956	0.3	1,229	*
Michigan	6,900	0.7	5,900	0.8	47,777	2.4	26,086	0.6
Minnesota	1,300	0.1	200	*	11,878	0.6	4,700	0.1
Ohio	11,500	1.2	7,600	1.1	17,783	0.9	46,477	1.1
Wisconsin	16,000	1.6	400	0.1	6,002	0.3	5,919	0.1
Total	53,000	5.3	30,300	4.2	149,102	7.5	219,614	5.3
South								
Alabama	12,700	1.3	9,000	1.3	52,110	2.6	37,031	0.9
Arkansas	1,200	0.1	2,000	0.3	13,708	0.7	7,540	0.2
D.C.	1,600	0.2	0	*	41,950	2.1	54,140	1.3
Florida	31,900	3.2	35,100	4.9	67,520	3.4	125,623	2.7
Georgia	5,500	0.6	19,400	2.7	94,768	4.8	345,167	8.4
Kentucky	4,600	0.5	5,300	0.7	21,372	1.1	64,286	1.6
Louisiana	2,600	0.3	5,300	0.7	39,379	2.0	82,832	2.0
Mississippi	5,100	0.5	15,400	2.1	6,378	0.3	68,369	3.1
North Carolina	19,900	2.0	17,400	2.4	90,595	4.5	189,805	4.6
Oklahoma	6,800	0.7	8,300	1.2	20,726	1.0	55,649	1.4
South Carolina	1,900	0.2	36,700	5.1	74,814	3.8	102,855	2.5
Tennessee	8,300	0.8	7,800	1.1	27,575	1.4	24,026	0.6
Texas	28,600	2.9	71,300	9.9	121,068	6.1	292,465	7.1
Virginia	11,400	1.1	36,100	5.0	150,011	7.5	247,175	6.0
West Virginia	4,000	0.4	0	*	0	*	3,300	0.1
Total	146,100	14.7	269,100	37.4	821,974	41.3	1,700,263	41.3

TABLE 22 (continued)

Department of Defense Military Construction Awards: Fiscal 1960-1985
(in thousands of dollars)

Region and State	1960		1970		1981		1985[1]	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
West								
Alaska	47,000	4.7	17,600	2.4	27,304	1.4	102,871	2.5
Arizona	10,400	1.0	23,300	3.2	21,826	1.1	57,835	1.4
California	82,800	8.3	102,600	14.3	302,902	15.2	692,992	16.8
Colorado	13,400	1.3	29,900	4.2	66,608	3.3	77,260	1.9
Hawaii	0	*	16,800	2.3	125,186	6.3	240,370	5.9
Idaho	170,600	17.1	1,500	0.2	0	*	2,853	0.1
Kansas	37,300	3.7	4,600	0.6	11,175	.6	44,800	1.1
Missouri	16,300	1.6	400	0.1	19,917	1.0	16,661	0.4
Montana	36,700	3.7	66,500	9.2	740	*	5,475	0.1
Nebraska	56,000	5.6	4,300	0.6	3,270	0.2	51,100	1.2
Nevada	1,600	0.2	10,000	1.4	8,350	0.4	31,630	0.8
New Mexico	6,500	0.7	9,300	1.3	14,184	0.7	28,866	0.7
North Dakota	101,000	10.1	8,300	1.2	27,687	1.4	40,435	1.0
Oregon	7,900	0.8	300	*	620	*	5,650	0.1
South Dakota	44,400	4.5	1,000	0.1	20,720	1.0	55,932	1.4
Utah	900	0.1	2,000	0.3	11,700	0.6	46,903	1.1
Washington	11,800	1.2	21,400	3.0	103,520	5.2	117,506	2.9
Wyoming	56,700	5.7	600	0.1	1,978	0.1	92,720	2.3
Total	701,300	70.4	320,400	44.5	767,687	38.5	1,711,859	41.6
Northeast	96,100	9.6	99,800	13.9	253,140	12.7	483,139	11.7
Midwest	53,000	5.3	30,300	4.2	149,102	7.5	219,614	5.3
Northeast and Midwest	149,100	15.0	130,100	18.1	402,242	20.2	702,753	17.1
South	146,100	14.7	269,100	37.4	821,974	41.3	1,700,263	41.3
West	701,300	70.4	320,400	44.5	767,687	38.5	1,711,859	41.6
South and West	847,400	85.0	589,500	81.9	1,589,661	79.8	3,412,122	82.9
U.S. Total	996,500	100.0	719,600	100.0	1,991,903	100.0	4,114,875	100.0

*Less than one-tenth of one percent.

[1] Based on military contruction figures reported in the Continuing Resolution Bill for Fiscal 1985.

SOURCES: Staff calculations from U.S. Department of Defense, *Military Construction Programs By State* (Washington, D.C.: Office of Assistant Secretary of Defense -- Comptroller, 1978); U.S. Department of Defense, *Construction Program (C-1) Department of Defense Budgets for Fiscal Years 1982-1984* (Washington, D.C.: February 1983); and U.S. Congress, 98th Congress, 2nd Session, Continuing Resolution Bill H.J. Res. 648, October 4, 1984.

FIGURE 5
TEN STATES WITH THE LARGEST INCREASES AND DECREASES IN MILITARY CONSTRUCTION FUNDS, 1981–1985

(in percentage share)

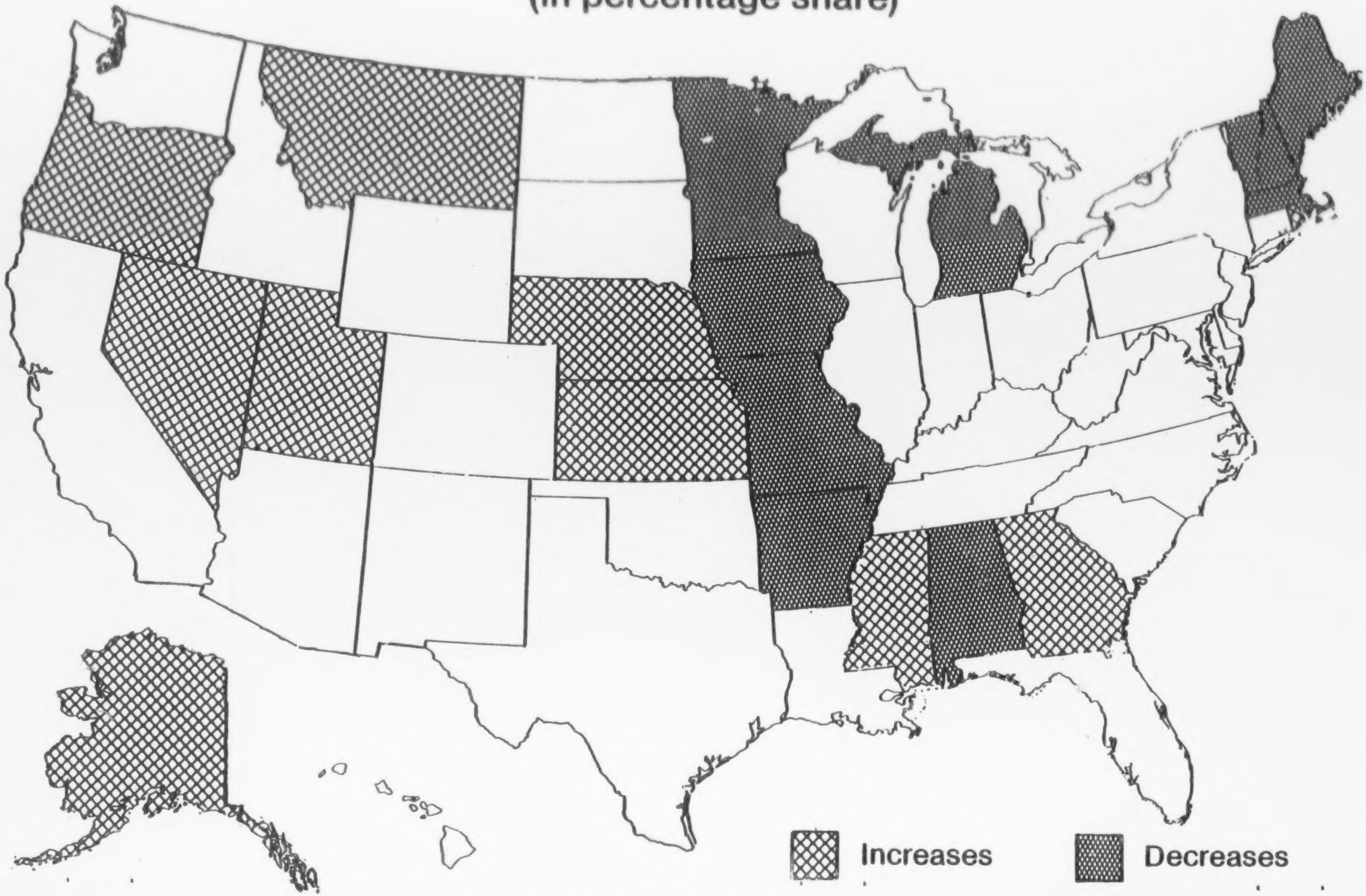
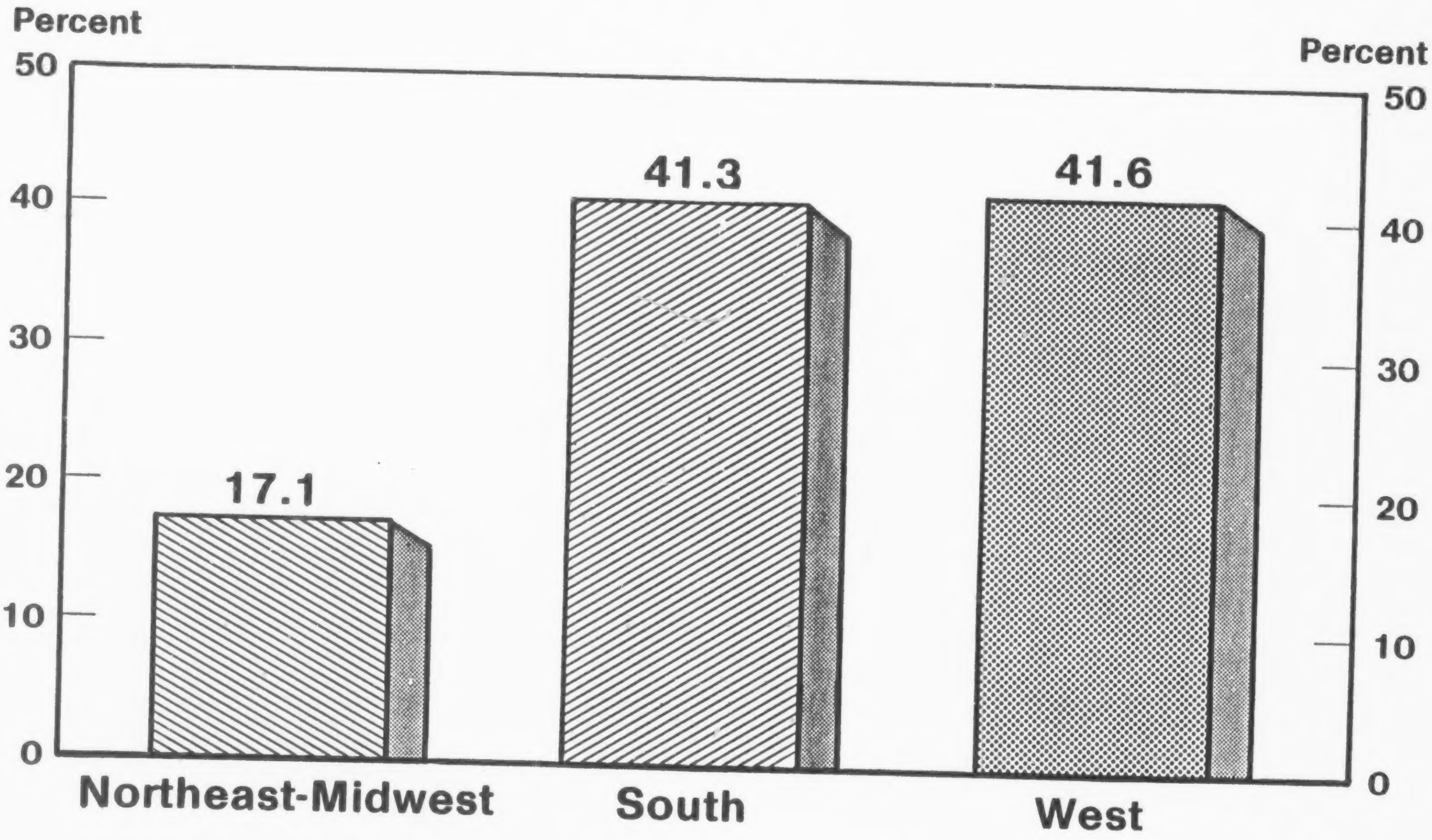


FIGURE 6
MILITARY CONSTRUCTION
FY 1985



F. Installations

Military installations (those facilities with active duty personnel assigned) are key recipients of defense spending because they generate economic activity and provide financial support through employment for the communities that surround them. They serve as community assets by attracting private firms that conduct businesses in the defense sector, as well as maintaining and strengthening local businesses and housing opportunities. In 1983, the Northeast-Midwest region had 205 installations or 33 percent of the total, which is significantly more than the percentage of personnel assigned to the region, as illustrated by Figure 7. Large disparities exist between individual states. California, the largest state in terms of population, has 76 facilities, while New York, the second largest state, has only 29. Florida has 29 installations and 100,677 personnel, equal to roughly one quarter of the personnel in the entire Northeast-Midwest region. Seven of the 18 states in the region each have less than one percent of the total number of principal military installations. In addition, eight of the ten states with the lowest average number of personnel per installation are located in the Northeast and Midwest (see Table 23).

The installations in the South and West far outnumber those in the Northeast and Midwest, and they have over three quarters of all military personnel. In the case of both personnel and installations, the Northeast-Midwest region is losing valuable investment opportunities. In addition, half of nearly every Northeastern and Midwestern state's military personnel consists of civilian employees, not those on active duty. The number of active duty military personnel stationed at the installations in the Northeast-Midwest region is approximately 42 percent of the total, as shown in Table 23.

Although there have been few recent base closures, elimination of many installations between 1969 and 1979 took a significant toll on the Northeast and Midwest region, as illustrated by Figure 8. The Northeast-Midwest region had 208, or 44 percent, of its facilities close during the ten-year period, in contrast to 34.8 percent in the West and 21.6 percent in the South.

The Department of the Army's recent decision to station a light infantry division at Fort Drum offers a good model of the impact that a military installation can have on an area. Watertown, the home of Fort Drum, is one of the most economically distressed areas in northern New York. As a result of the placement of the new division, it has been estimated that the population in the Watertown area alone will increase by 20 percent. In addition, critical funds will flow into the area both directly and indirectly; approximately $41 billion in construction funds is slated for Watertown over the next several years and numerous affiliated businesses undoubtedly will spring up in the community. DoD's Office of Economic Adjustment is working closely with the community so that Watertown can experience a "planned" expansion and take advantage of the ensuing economic opportunities.

FIGURE 7
PERCENT OF DOD FACILITIES AND PERSONNEL
FY 1983

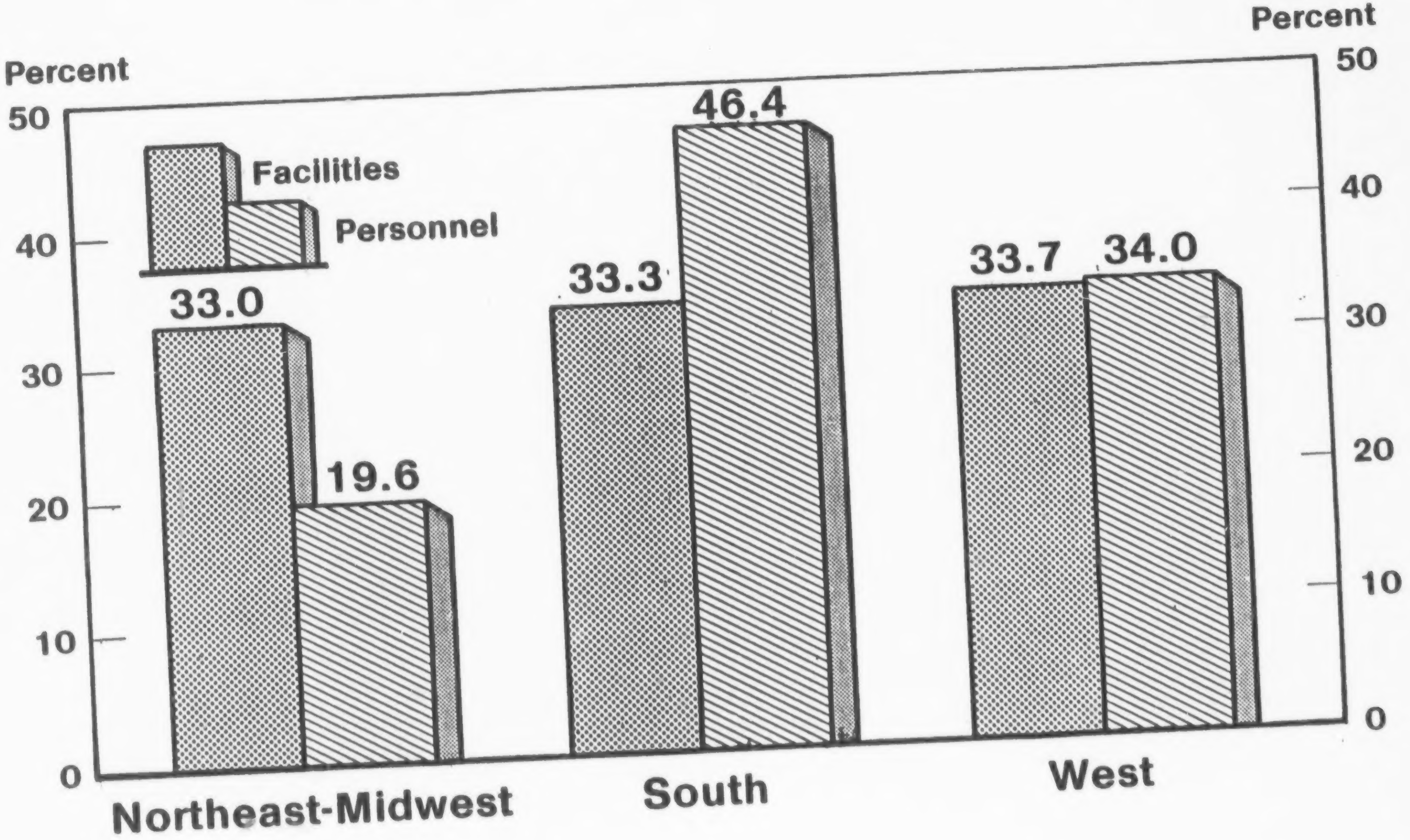


TABLE 23

Principal Military Installations and Personnel: Fiscal 1983

Region and State	Installations[1] Amount	Installations[1] Percent of Total	Personnel[2] Amount	Personnel[2] Percent of Total
New England				
Connecticut	10	1.6	10,380	0.4
Maine	7	1.1	7,486	0.3
Massachusetts	18	2.9	22,307	1.0
New Hampshire	5	0.8	14,459	0.6
Rhode Island	4	0.6	8,086	0.4
Vermont	2	0.3	595	*
Total	46	7.4	63,313	2.7
Mid-Atlantic				
Delaware	2	0.3	6,717	0.3
Maryland	24	3.9	76,616	3.3
New Jersey	15	2.4	48,756	2.1
New York	29	4.7	41,347	1.8
Pennsylvania	20	3.2	61,982	2.7
Total	90	14.5	235,418	10.2
Midwest				
Illinois	15	2.4	57,880	2.5
Indiana	8	1.3	19,838	0.9
Iowa	5	0.8	1,921	0.1
Michigan	12	1.9	21,544	0.9
Minnesota	5	0.8	3,622	0.2
Ohio	19	3.1	44,491	1.9
Wisconsin	5	0.8	3,879	0.2
Total	69	11.1	153,175	6.6
South				
Alabama	12	1.9	51,162	2.2
Arkansas	10	1.6	14,653	0.6
District of Columbia	1	0.2	29,616	1.3
Florida	29	4.7	100,677	4.4
Georgia	18	2.9	99,561	4.3
Kentucky	6	1.0	54,983	2.4
Louisiana	8	1.3	34,956	1.5
Mississippi	12	1.9	29,252	1.3
North Carolina	13	2.1	113,196	4.9
Oklahoma	8	1.3	56,624	2.5
South Carolina	11	1.8	70,067	3.0
Tennessee	6	1.0	19,484	0.8
Texas	35	5.6	196,205	8.5
Virginia	34	5.5	199,203	8.6
West Virginia	4	0.6	1,995	0.1
Total or Average	207	33.3	1,071,634	46.4

TABLE 23 (continued)

Principal Military Installations and Personnel: Fiscal 1983

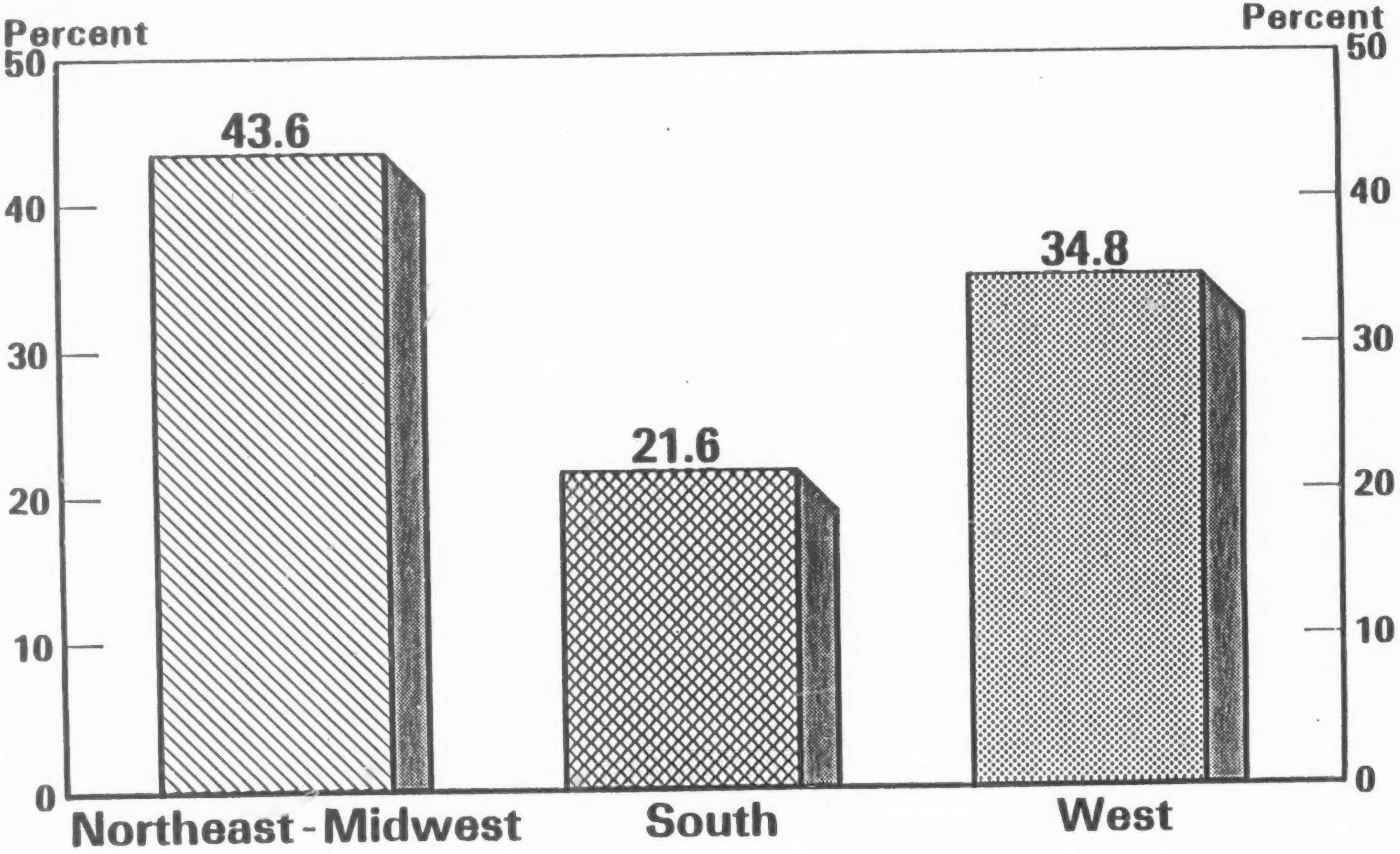
	Installations[1]		Personnel[2]	
Region and State	Amount	Percent of Total	Amount	Percent of Total
West				
Alaska	11	1.8	25,296	1.1
Arizona	10	1.6	34,157	1.5
California	76	12.2	337,931	14.6
Colorado	13	2.1	53,940	2.3
Hawaii	18	2.9	65,959	2.9
Idaho	3	0.5	7,175	0.3
Kansas	9	1.4	31,028	1.3
Missouri	10	1.6	37,819	1.6
Montana	3	0.5	5,279	0.2
Nebraska	3	0.5	16,043	0.7
Nevada	7	1.1	13,696	0.6
New Mexico	7	1.1	26,316	1.1
North Dakota	4	0.6	13,265	0.6
Oregon	6	1.0	3,812	0.2
South Dakota	3	0.5	7,734	0.3
Utah	7	1.1	28,397	1.2
Washington	17	2.7	71,816	3.1
Wyoming	2	0.3	4,707	0.2
Total	209	33.7	784,370	34.0
Northeast	136	21.9	298,731	12.9
Midwest	69	11.1	153,175	6.6
Northeast and Midwest	205	33.0	451,906	19.6
South	207	33.3	1,071,634	46.4
West	209	33.7	784,370	34.0
South and West	416	67.0	1,856,004	80.4
U.S. Total	621	100.0	2,307,910	100.0

[1] These figures include installations, activities, and properties. They include only those facilities with active duty personnel.

[2] Does not include undistributed personnel.

SOURCE: Staff calculations from U.S. Department of Defense, Distribution of Personnel By State and By Selected Locations (Washington, D.C.: September 30, 1983).

FIGURE 8
PERCENT OF BASE CLOSURES
1969-1979



IV. Forecast of Future Defense Department Spending

The Defense Department is entering a new stage of development, one of growth and of a shift in concentration of that growth. Currently, the defense budget is $274.4 billion -- almost 30 percent of the entire federal budget. By administration estimates, the defense budget is projected to increase to $354.0 billion by 1987. The defense budget affects every region of the country, nearly every industry, and the composition of the labor force as well through its direct and indirect expenditures. In 1981, defense purchases accounted for 7 percent or more of total production in 26 states.

The historical framework provided earlier gives a good background against which to estimate where future defense spending will be distributed. In general, due to the shift of the defense budget toward purchases and away from pay, states with a high concentration of personnel and military bases will experience slower growth than states with large shares of direct defense purchases. This change will have the greatest impact on the future distribution of spending. However, the following additional factors also will affect the distribution of spending and variations among the states and regions:

- Long-term trends in the location of firms.
  - Defense goods-producing firms will receive a growing share of the defense budget, as will their localities.
- Competition among firms for contracts.
  - Prime contracts often are awarded on a competitive basis and there is no accurate way to predict exactly which firms will receive contracts.
- A shift in the composition of the budget.
  - The increased emphasis on procurement and away from salaries will affect states and localities directly, depending on the category in which they have the largest share.

In response to inquiries regarding the future pattern of defense and defense-related expenditures, DoD released a study entitled The Geographic Distribution of Potential Defense Expenditures. The study addresses direct and indirect expenditures for the period 1983 to 1989. Table 24, taken from the study, shows the increases in per capita defense expenditures for that period, including direct and indirect expenditures. As the table shows, New England will receive the largest total per capita increase in defense expenditures, primarily due to the large number of defense manufacturers located there. Overall, the per capita increases are relatively similar across the board, with the lowest growth rate of 28.3 percent occurring in the west south central states and the highest growth rate of 47.3 percent taking place in New England.

As mentioned, categories of spending will experience changes within the entire defense budget, with some growing more rapidly than others. State shares of these categories may not change, although the actual funds allocated to states will either remain close to the same or increase relative to growth. In general, expenditures for military personnel are projected to increase at the slowest rate, and the percent share for this category is projected to decline from 18.2 percent in fiscal 1983 to 14.4 percent in fiscal 1989. The military construction account will experience substantial growth due to its relation to the support of specific weapon systems. The growth will be significant in terms of percent increase; however, the actual dollar increase allocated to military construction will be relatively small because of the account's current size. Similarly, the operations and maintenance account will grow rapidly, and its distribution will vary depending on the levels of personnel and bases within an area. The research and development budget is projected to nearly double between fiscal 1983 and 1989. The procurement budget will grow substantially, increasing at one of the most rapid rates of any category. The procurement function is projected to comprise 35 percent of the entire defense budget in fiscal 1989. This does not include funding for research and development, military construction, or operations and maintenance. Table 22 shows the estimated direct defense expenditures per capita by category for 1983 and 1989.

The growth of defense expenditures will affect several industries and occupations directly and indirectly. In a recent study, Regional Forecasts of Industrial Base Manpower Demand, 1981 to 1987, Data Resources, Inc. (DRI) concluded that ten industries will experience dramatic employment growth during the stated period, including: miscellaneous services; wholesale and retail trade; business services; finance and insurance; construction; eating and drinking establishments; transportation and warehousing; radio and television communications equipment; electronic components and accessories; and communications equipment (other than radio and television). In several industries, including mining, petroleum refining, ordnance and accessories, primary metals, electrical machinery, communications equipment, and aircraft and other transportation equipment, employment for defense will make up over 50 percent of total new employment.

DRI found that the fastest-growing individual occupations for defense will include four computer-oriented occupations and three engineering occupations.[2] Other defense-oriented jobs that will grow include electrical and electronic technicians, electronic wirers, lens grinders, and electrical and electronic assemblers. "Across all occupations, defense impacts will account for over 20 percent of net new employment in the private sector," the report states.[3]

On a state-specific basis, the following occupations will experience rapid employment growth in the states indicated:

Drafters: California, Texas

Electrical and electronic technicians: California, Connecticut, Florida, Maryland, Massachusetts, New Jersey, Texas

Mechanical engineering technicians: California, Connecticut

Computer programmers: California, New York, Texas

Systems analysts: Connecticut, New York.

The impact of defense expenditures and current funding flows becomes clear when considering the fact that, for example, "virtually all new jobs for aero-astronautic engineers in Ohio and Pennsylvania will be associated with defense needs and over one-half of all new jobs for electrical engineers in Indiana will be defense related."[4]

The defense share of the GNP is expected to remain around 7 percent over the next several years. It is evident from the estimates here that defense spending will take on an increasingly important role in shaping regional economies, the growth of industries, and employment patterns. The DRI model projects that the impact of defense expenditures will continue to be concentrated in several states, including California, Texas, New York, Florida, Virginia, Massachusetts, and Connecticut. Particularly sharp increases in the defense share of total production are projected for Virginia, Alabama, Washington, and California.[5] However, through direct and indirect expenditures, defense spending will affect every state and nearly every industry, increasing its relative importance in each.

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[2] U.S. Department of Defense, Office of the Director for Program Analysis and Evaluation, Economic Analysis Division, The Geographic Distribution of Potential Defense Expenditures (Washington, D.C.: July 1984), p. 20.

[3] Ibid.

[4] Ralph M. Doggett, Regional Forecasts of Industrial Base Manpower Demand, 1981 to 1987: Volume I: Forecast Summary (Washington, D.C.: Data Resources, Inc., March 1983), p. 21.

[5] Ibid., p. 2.

TABLE 24

Increase in Projected Per Capita Defense Expenditures: Fiscal 1983 to 1989 (in percent)

Region	Direct			Indirect	Total
	Pay	Purchases	Total		
New England	7.6	51.5	45.0	50.6	47.3
Mid-Atlantic	11.1	54.9	44.9	44.2	44.5
South Atlantic	2.4	47.5	22.6	38.8	29.3
East North Central	13.2	59.3	46.2	47.4	47.0
West North Central	9.1	55.5	43.1	45.4	44.3
East South Central	11.3	50.7	30.0	46.8	39.2
West South Central	3.0	40.4	24.1	31.6	28.3
Mountain	0.4	45.9	22.3	45.4	34.1
Pacific	2.9	51.5	35.6	45.0	39.1
U.S. Average	6.7	52.2	35.5	43.0	39.2

SOURCE: U.S. Department of Defense, Office of the Director for Program Analysis and Evaluation, Economic Analysis Division, The Geographic Distribution of Potential Defense Expenditures (Washington, D.C.: 1984).

TABLE 25

Estimated Direct Defense Expenditures Per Capita: 1983 and 1989
(in 1983 dollars)

Region	Military Personnel		Military Construction		O&M		Procurement		RDT&E		Retired Pay	
	1983	1989	1983	1989	1983	1989	1983	1989	1983	1989	1983	1989
New England	83	92	16	28	306	389	540	856	168	265	42	45
Mid-Atlantic	52	60	9	15	178	227	193	327	61	95	23	25
South Atlantic	236	242	39	64	282	323	143	235	83	120	108	109
East North Central	57	65	10	18	107	136	160	273	30	46	22	25
West North Central	108	122	17	30	148	189	252	414	90	140	39	42
East South Central	130	146	40	71	185	228	80	135	9	11	64	70
West South Central	156	162	29	49	229	271	143	221	46	66	82	84
Mountain	181	184	32	50	184	205	113	184	119	170	102	101
Pacific	204	210	46	75	349	411	377	635	212	309	89	91
U.S. Average	134	145	26	44	218	266	211	351	87	131	62	65

SOURCE: U.S. Department of Defense, Office of the Director for Program Analysis and Evaluation, Economic Analysis Division, The Geographic Distribution of Potential Defense Expenditures (Washington, D.C.: 1984).

V. Conclusion

During the past decade, members of Congress from Northeastern and Midwestern states have pressed for development of more geographically balanced defense expenditure policies. This study, which includes fiscal 1983 and some fiscal 1984 and 1985 actual data, shows that more still has to be done to achieve such balance. The regional averages document the fact that many Northeastern and Midwestern states continue to receive low levels of defense expenditures in nearly every category: 31 percent of total defense expenditures; 28 percent of defense personnel; 21 percent of military payroll; 17 percent of military construction funds; 19 percent of installations; and 37 percent of military prime contract dollars. This inequity and its impact on local, state, and regional economies should be addressed at all levels through administrative and policy actions.

In the procurement section in particular, several state and local initiatives to affect the distribution of defense spending were highlighted. Numerous other examples could be cited in several other budget categories as well, illustrating the importance of good background data and the opportunities to affect these levels once they have been determined.

Several initiatives taken during the 98th Congress begin to address the consequences of the low level of defense expenditures in the Northeast-Midwest region. These actions include:

- Legislation establishing a new program to support procurement centers designed to help businesses seeking federal contracts. An amendment to the Defense Authorization Bill offered by Senators Dan Quayle (R-Indiana), Carl Levin (D-Michigan), Alan J. Dixon (D-Illinois), and William S. Cohen (R-Maine) and the Defense Appropriations Bill by Senator Alfonse M. D'Amato (R-New York) established a $2 million fund for cooperative agreements between the Defense Department and state and local public and private representatives to establish and maintain centers. The program, administered by the Defense Logistics Agency (DLA), provides matching funds (each award not to exceed $150,000) to state and local governments and nonprofit institutions that currently provide or will provide technical assistance to businesses seeking federal contracts. Fifty percent of the funds will go to existing centers, with the remaining awarded to new centers. This program will provide necessary technical assistance and information to businesses that want to break into defense procurement or the federal market overall, ensuring increased competition and a broader range of defense suppliers.

o Extension of the Labor Surplus Area Test Program -- the Pentagon's targeted procurement effort. This program was extended for one year with the passage of the fiscal 1985 Defense Authorization Bill. The program, which modifies the so-called Maybank amendment, has been successful in targeting nonstrategic procurement contracts to areas of high unemployment. The Defense Logistics Agency (DLA), which administers the program, released its most recent report on the program in July 1984. The report found that during 1983, 14,192 contracts totaling $2.1 billion were put up for bid under the program. Of those, nearly one-third (4,713), with a total value of over $1 billion, were awarded to firms in labor surplus areas, resulting in the creation or retention of over 20,000 jobs. DLA paid a price differential on only 1.3 percent (190) of the contracts awarded to firms in labor surplus areas, with an added cost of $347,900, or 1.3 percent of the total value of the contracts. Currently the program authorizes DLA to award up to $4 billion in nonstrategic contracts, with a maximum price differential of 2.2 percent, down from the original 5 percent premium set at the start of the program in fiscal 1982.

o A bill, H.R. 4209, to increase competition in contracting and expand contracting opportunities to more businesses. The Small Business and Federal Procurement Competition Enhancement Act of 1984 was introduced by Senators Lowell A. Weicker (R-Connecticut) and Alan J. Dixon (D-Illinois) and by Representative Barbara Boxer (D-California) in the House, and signed into law in July 1984. Major provisions of the legislation include planning for future competition; encouragement of new competitors to broaden the industrial base; enhancement of procurement notices; technical data management to foster future competition; elimination of contractor ceilings limiting subcontractor sales directly to the United States; commercial pricing for spare parts; validation of proprietary data restrictions; and general encouragement of competition and cost savings.

o Legislation to improve DoD's procurement policies. In light of reports of multi-thousand dollar refrigerators and $768 coffee pots, several pieces of legislation, including the law previously discussed, were passed by Congress that will alter various stages of the procurement process and ultimately make it more efficient and cost-effective. Furthermore, oversight hearings are being held to identify problem areas and appropriate administrative or legislative solutions. Some of the issues addressed by the legislation include: the need to increase small business participation in the defense procurement process; the importance of competitive bidding; the necessity for increased oversight of spare parts purchases; and the need to expand and maintain defense industrial capacity.

- Legislation to ensure a strong and capable defense industrial base. The scheduled reauthorization of the Defense Production Act led to numerous hearings, testimony, and legislation on the need for a productive manufacturing base even in peacetime. Proposed legislation focused on three areas to help strengthen and maintain critical defense industries: credit assistance to small firms that produce defense goods; worker training and retraining for skills needed in defense industries; and stockpile provisions to insure the availability of strategic materials in these areas. In April 1984, however, Congress passed a simple extension of the Defense Production Act, leaving such questions to be considered when it expires at the end of fiscal 1986.

- Efforts by congressional leaders to ensure administration support for more balanced defense expenditure policies. Members of the Northeast-Midwest Congressional and Senate Coalitions met with Secretary of Defense Caspar W. Weinberger in August 1983 to discuss growing concern over inequities in the distribution of defense expenditures, personnel, and equipment. The secretary made several suggestions for departmental action, and in a letter to the Coalitions he agreed to:

  -- name Deputy Under Secretary for Acquisition Management Mary Ann Gillece to "bird dog" implementation and execution of the targeted procurement test program;

  -- schedule more DoD procurement conferences in the region; and

  -- establish a joint DoD-Coalition task force to examine rehabilitation and maintenance needs of existing defense bases in Northeastern and Midwestern states.

- Successful lobbying by House and Senate members and state and local leaders from New York state for the placement of one of the Army's Light Armored Infantry Divisions at Fort Drum, New York. As a result, Fort Drum will be the recipient of the first new division created by the Army since 1975, and the first stationed in the Northeast since World War II. The new division will station approximately 7,500 soldiers and 9,700 dependents in the area.

The regional disparities in the distribution of defense personnel and expenditures detailed in this study have been evolving over the past 30 years. The Northeast-Midwest Coalitions' meeting with Secretary Weinberger, other ongoing meetings with DoD personnel, and the initiatives outlined above are first steps to ensure a more equitable distribution of defense expenditures. Although such actions show that some progress is being made toward this goal, this study reveals that changing a generation of defense policy trends is a slow and difficult process -- but not one that is out of the grasp of local, state, and federal leaders. An awareness of not only how many but also what kind of defense dollars are entering a state can help elected officials understand the role of defense spending in their economy. To effect change in defense spending patterns, it is important to understand all the pieces of the vast defense pie.

Appendix

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